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QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING MARCH 31, 1883.

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ASTOR, LENOX AND
TILDEN FOUNDATIONS

REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., April 2, 1883.

TO THE HONORABLE CITY COUNCIL:

In compliance with the ordinance approved February 14, 1883, the Board of Public Works present herewith its first quarterly report.

March 5th, Mr. Frederick E. Anthony, who had been elected a member of the Board by your honorable body to succeed Mr. Samuel B. Swan, whose term of office expired on that day, was present. The Board organized by the election of Mr. Charles Anthony, President.

The Board call the attention of your honorable body to the fact that considerable highway work has been ordered in streets where water pipes have not been laid or sewers constructed and that to hereafter avoid the tearing up of newly made streets for the purposes above named it would appear to be advisable to lay the water pipes, and where practicable to build the sewers.

The following is a list of streets upon which highway work has been ordered, in which, in the opinion of the Board, water pipes should be laid before the highway work is done:

Audrey street, from Bowdoin street to Delaine street:—will require about 350 feet of six inch pipes.

Holden street, from Beach street to Smith street:—will require about 500 feet of eight inch pipes.

Potter's avenue, from Broad street to Greenwich street:—will require about 560 feet of six inch pipes.

Somerset street, from Friendship street to West Clifford street:—will require about 120 feet of six inch pipes.

Wayland street, from Waterman street to Pitman street:—will require about 270 feet of six inch pipes.

Manning street, from Governor street to Gano street:—will require about 600 feet of six inch pipes.

The following is a list of streets upon which highway work has been ordered, in which sewers are not, but could very properly be constructed before the highway work is done:

Branch avenue, from North Main street, northerly:—sewer can be laid, from Thurber's lane to Livingston street.

Holden street, from Beach street to Smith street:—sewer can be laid.

Clinton street, from Broad street to Prairie avenue:—sewer can be laid.

Polk street, from Pettis street to Hedley street:—one-half can be laid into Pettis street.

Providence street, from Dudley street to Pearl street:—sewer can be laid.

Willard street, from Plain street to Eddy street:—sewer can be laid by building a short piece in Eddy street.

Manning street, from Governor street to Gano street:—sewer can be built.

Respectfully submitted,

CHARLES ANTHONY,
F. E. ANTHONY,
SAMUEL M. GRAY,
City Engineer,
Board of Public Works.

HIGHWAYS.

A contract, dated March 20th, 1883, has been executed with the Rhode Island Concrete Co., to lay the concrete required for the season of 1883.

March 21st, last, proposals for furnishing curbing and cross-walk stone were opened under advertisement dated March 5, 1883, and on the 31st of said month, the proposal of Mr. Joseph H. West, of Franklin, Maine, to furnish 10,000 feet straight curbing, 300 feet circular curbing, 10 feet radius, and 500 feet circular curbing, 8 feet radius, was accepted. A contract has since been executed for furnishing the same which will amount to $5,535.00.

Statements have been prepared of the cost of curbing set ascertained by the Board, and certified to the Board of Aldermen for approval as follows, viz.:

Tefft street, from Atwell's avenue to Federal street.	$565 29
America street, from Asia street to Africa street..	150 83
North Main street, from Randall street to Branch avenue.....	1,138 85
Lloyd street, from Prospect street to Thayer street.	1,583 90
Vinton street, from Atwell's avenue to Gesler street.	229 56
Parade street, from High street to Cranston street.	1,203 12
Waterloo street, from Dexter street to Parade street.	715 69
Durfee street, from Dexter street to Parade street..	631 64
Africa street, from Tefft street to America street...	470 68
Total.....	$6,689 56

The following work ordered by the City Council has not been commenced:

Sidewalks to be Curbed and Gutters Paved.

Date of Order.	
June 16, 1881,	*Branch avenue, from North Main street, northerly,* 1,466 *lineal feet.*
Dec. 15, 1881,	*Audrey street, from Bowdoin street to Delaine street.*
Dec. 15, 1881,	*Hospital street, from Borden street to Lockwood street.*
July 6, 1882,	*Bath street, from Chalkstone avenue to Orms street.*
" " "	*Greenwich street, west side, from Earle street to Reservoir avenue.*
" " "	*Holden street, from Beach street to Smith street.*
" " "	*Mawney street, from Bucklin street to Greenwich street.*
" " "	*Moore street, from Greenwich street to Updike street.*
" " "	*Reservoir avenue, west side, from Greenwich street to the railroad bridge.*
Aug. 3, "	*Capron street, in front of Julian street school house estate.*
" 3, "	*Delaine street, from Audrey street to Appleton street.*
Oct. 19, "	*Clinton street, from Broad street to Prairie avenue.*
" " "	*Polk street, from Pettis street to Hedley street.*
" " "	*Potter's avenue, from Broad street to Greenwich street.*
" " "	*Providence street, from Dudley street to Pearl street.*
Nov. 16, "	*Mawney street, from Greenwich street to Updike street.*
" " "	*Transit street, from Governor street to Ives street.*

Nov. 16, 1882, *Willard street, from Plain street to Eddy street.*

" " " *Eddy street, from Thurber's avenue to Pavilion avenue.*

Dec. 21, " *Clinton street, from Prairie avenue to Gay street.*

" " " *Somerset street, from Friendship street to West Clifford street.*

" " " *Wayland street, from Waterman street to Pitman street.*

Jan. 18, 1883, *Manning street, from Governor street to Gano street.*

Concrete Sidewalks.

No. of Resolution.	Date of Approval.	
	Aug. 3, 1882,	*Amherst and Putnam streets, adjoining Putnam street fire engine station.*
	Aug. 3, 1882,	*Julian and Capron streets, adjoining Julian street school house estate.*
No. 247.	Nov. 14, 1882,	*Courtland street, from Penn street to Gesler street.*
" 247.	" 14, "	*Wayland avenue, west side, from Humboldt avenue, about 200 feet northerly.*
" 247.	" 14, "	*Dodge street, from High street to Cranston street.*
" 247.	" 14, "	*Harrison street, from High street to Cranston street.*
" 247.	" 14, "	*Pond street, south side, from Winter street to Pearl street.*
" 247.	" 14, "	*Pleasant street, from Camp street to Ivy street.*

ABATE NUISANCE ON

No. 218. May 20, 1882, *Mitchell street, caused by overflow of surface water.*

PAVE WITH GRANITE BLOCKS

No. 476. Dec. 2, 1882, *Chestnut street, from Bassett street to Elm street.*

MAKE CONNECTION WITH SEWER AT CORNER OF

No. 490. Dec. 6, 1882, *Arlington avenue and Angell street.*

TO BE REPAIRED.

Aug. 3, 1882, *Diman place.*
Dec. 4, 1882, *Farthing street.*

The following work ordered by the City Council had been commenced prior to January 1, 1883, but no work has been done under these orders since that date:

SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Africa street, from Tefft street to America street:—curbed and first layer of screened stone spread.

America street, east side, from Asia street to Africa street:—curbed and gutters paved.

Lloyd street, from Prospect street to Thayer street:—curbed, gutters paved, roadway macadamized and cross-walks laid.

Vinton street, from Atwell's avenue to Gesler street:—curbed only.

The following list completing the orders of the City Council of uncompleted highway work is in a state of progress, as stated.

Sidewalks to be Curbed and Gutters Paved.

Tefft street, from Atwell's avenue to Federal street:—the curbing having been set and first layer of screened stone spread prior to January 1, 1883, the street has been rolled and the gutters partly paved during the last quarter.

To be Graded.

Hawkins street, from Admiral street to Branch avenue:—the excavation had been done from Admiral street to a point about 600 feet easterly, prior to January 1, 1883, since that date the excavation has been completed except the forming of slopes.

The amount of bills approved on account of Highways, from January 1, to March 31, 1883, inclusive, was $29,396.-26.

Classified as follows:

(Many of the bills approved were for expense incurred prior to the commencement of the quarter.)

Cleaning streets from ice and snow	$7,012 02
Cleaning streets	1,005 40
Repairing unpaved streets	817 72
Repairs on paved streets	49 44
Labor and materials, crushed stone	5,045 80
Labor on materials	2,449 53
Barn expenses	2,366 73
Stone, paving and crosswalk	1,894 12
Repairs on and renewals of stone crushers	1,673 18
Tools, implements, etc	1,384 89
Salaries, superintendent, clerks, and inspectors	1,181 07
Labor and materials, blacksmith's shop	1,091 15
Horses, wagons, carts, harnesses, etc	641 42
Labor and materials, wheelwright shop	367 67
Labor and materials, harness shop	269 50
Labor and materials, fencing streets	169 81
Watchman at city yard	168 00
Office, city yard	15 05

Street [illegible] repairs and supplies	$11 08
Telephone lines	4 09
Hawkins street, from [illegible] street to Branch ave., grading	1,301 25
Vinton street, from [illegible] ave. to Sessler st., set curb and pave gutters	262 15
Marion street, from Ruskin st. to Greenwich st., set curb and pave gutters	134 65
Lloyd street, from Prospect st. to Thayer st., set curb and pave gutters	80 54
	$29,396 26

Bills deposited with the City Treasurer for collection, from January 1, to March 31, 1883, inclusive, amounted to $5,891.10, as follows, viz.:

For labor and materials on streets	$5,625 37
For street sweepings	137 05
For manure from barn	75 00
For grading blocks	20 28
For removing ashes, City Hall	18 80
For chopping blocks	9 00
For sundries	5 60
	$5,891 10

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to $245.83, as follows, viz.:

For labor and materials on streets	$143 09
For street sweepings	90 24
For tools, etc	12 50
	$245 83

The amount of expenditures on account of sidewalks and curbing from January 1, to March 31, 1883, inclusive, was $5,854.09

During the quarter coupons from sidewalks and curbing bills collected have been returned by the City Treasurer, and receipted for, amounting to $610.71.

WATER WORKS.

January 9th, the offers of Thomas Phillips & Co., and L. H. Tillinghast & Co., to each furnish five tons of lead pipe, were accepted. The offers amounted to $1,215.00.

January 30th, the offer of the Fales & Jenks Machine Co., to furnish twenty-five hydrant boxes and covers, delivered in this city, was accepted. Amount $750.00.

January 30th, the offer of the Boston Machine Co., to furnish, delivered in this city, one 10 inch water gate, five 8 inch water gates, sixty 6 inch water gates, five 4 inch water gates was accepted. The offer amounted to $1,590.35.

February 7th, the offer of the Fuller Iron Works to furnish special castings and service boxes was accepted; the amount of which will be about $2,000.00.

February 10th, the offer of John W. Lyon to furnish thirty-five 1 inch stops, ten 1 inch taps, twenty-five $\frac{3}{4}$ inch stops, twenty-five ^{3} inch taps, twenty-five $\frac{5}{8}$ inch plugs, was accepted. Amount, $185.63.

Feburary 10th, the offer of the Calder Lead Co., of New York to furnish, delivered in this city, twelve tons of lead pipe of various sizes, and twelve tons of pig lead, was accepted. Amount of offer, $2,510.40.

Feburary 23d, the proposal of R. D. Wood & Co., to furnish, delivered in this city, five tons of 2,240 pounds of 4 inch cast iron water pipes, four hundred and fifty tons of 2,240 pounds 6 inch cast iron water pipes, twenty-seven

tons of 2,240 pounds 8 inch, class A, cast iron water pipes, fifty-three tons of 2,240 pounds 8 inch, class B, cast iron water pipes, was accepted. A contract has since been executed with said company for furnishing these pipes, which will amount to $20,206.70.

The offer of the Fales and Jenks Machine Co., to furnish twenty-five hydrants, delivered in this city, was on the 29th of March accepted. Amount of the offer, $2,750.00.

The following is a list of water pipes ordered laid by the City Council prior to January 1, 1883, work upon which had not been commenced on that date, viz.:

No. Resolution. Date of Approval.

313. Sept. 6, 1882, **Reservoir avenue and Jordan street, from Fenner ave. to about* 304 *feet northerly from Reservoir ave.*

391. Oct. 7, 1882, *North Main street, from Evergreen st. to Cemetery street.*

443. Nov. 14, 1882, *D street, about* 15 *feet southerly from present end of pipe.*

444. Nov. 14, 1882, *East River street, from Waterman street southerly about* 182 *feet.*

467. Nov. 18, 1882, *Tockwotton street, from Gano street, easterly about* 200 *feet.*

489. Dec. 6, 1882, **Cypress and Olney streets, from East avenue to a point about* 1000 *feet south of Cypress street in Olney street.*

499. Dec. 6, 1882, *Chalkstone and Home ave., from end of pipe in Chalkstone avenue to a point in Home avenue, about* 500 *feet northerly from Chalkstone ave.*

518. Dec. 20, 1882, *Valley street, from Bradley street to Zone street.*

532. Dec. 21, 1882, *Harlan street, Johnston, from Barrows street, easterly about* 163 *feet.*

* Work delayed by request of parties guaranteeing income upon these lines.

533. Dec. 21, 1882, *McAvoy street, from Spruce street, northerly about* 100 *feet.*

March 19, 1883, the following was ordered laid:

91. March 19, 1883, *Blackstone street, from Prairie avenue about* 166 *feet westerly.*

In consequence of the cold weather no water pipes were laid during the quarter.

During the quarter ending March 31, 1883, there have been set one hundred and seven water meters and the use of four has been discontinued. There were in use at the close of the quarter, the following water meters.

KIND.	SIZES.							Total.
	⅝ in.	¾ in.	1 in.	1½ in.	2 in.	3 in.	4 in.	
Ball & Fitts, Piston	2,860	551	128	48	7	1	.....	3,595
Ball & Fitts, Rotary	1	.....	23	25	3	7	3	62
Crown	806	141	44	14	4	1	.....	1,010
Fales, Jenks & Sons	313	210	19	3	9	.....	3	557
Worthington	158	.....	.....	.....	.....	.....	1	159
	4,138	902	214	90	23	9	7	5,383

Fifty-one plumbers' licenses were issued during the quarter, all of which expire December 31, 1883.

Four hundred and forty-six permits were issued to plumbers for extensions and alterations in plumbing.

Thirty-one applications for water have been made, making the total number at the close of the quarter eleven thousand six hundred and twelve.

The number of service stops opened during the last quarter was thirty-five. The total number opened to March 31, 1883, was 10,954. The number in actual use March 31, was 10,353.

The following table exhibits the number of service stops opened by months from the commencement to March 31, 1883.

SERVICE STOPS OPENED TO MARCH 31, 1883.

MONTHS.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
January	.....	54	33	21	34	55	15	49	9	20	7	17	15
February	.....	47	18	18	7	25	23	18	9	19	3	11	9
March	.....	38	34	63	7	45	32	60	19	46	23	30	11
April	....	109	109	108	32	108	82	78	52	58	55	49	.....
May	.. ..	224	206	147	162	168	136	95	80	84	66	72	.....
June	.....	329	295	151	172	148	114	103	71	109	82	48	....
July	.....	333	261	127	141	158	83	80	49	75	56	77	.....
August	.....	224	209	123	83	94	91	51	51	39	58	87	.....
September	.....	184	147	139	101	94	80	63	44	37	60	67	....
October	.....	138	135	160	92	84	81	78	79	48	61	56	....
November	. ...	100	104	185	86	54	73	57	63	54	37	64	.....
December	56	83	45	122	60	35	55	45	47	29	40	27	.....
	56	1,863	1,596	1,364	977	1,068	865	777	573	618	548	614	35

The average daily consumption of water during the last quarter, was 3,869,702 gallons.

The amount of bills approved on account of water works from January 1, to March 31, 1883, inclusive, was

For construction and extension..... $6,505 55
Classified as follows, viz.:

Stop valves	$1,590 35	
Cast iron water pipes	1,525 04	
Service pipes	1,218 71	
Laying water pipes	406 03	
Laying service pipes	397 22	
Rent of wharf and pipe yard	352 86	
Special castings	251 36	
Wharf salaries	243 00	
Barn expenses	200 00	
Taps and stops	173 13	
Labor on and carting pipes	80 25	
Horse and wagon account	61 35	
Superintendent's clerk	6 25	
	$6,505 55	

For maintenance..... $18,093 55
Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$1,370 08	
Sundries	1,112 43	
Engineers	800 00	
Firemen	570 45	
New pumping works	522 26	
Superintendence	333 32	
Oil, waste and packing	235 03	
Corliss pumping engine	122 98	
Lights	98 35	
Labor on fuel	92 00	
Real estate, repairs, etc	25 48	
Expenses on surveys	21 52	
Care of grounds	16 37	
		$5,320 27

SOCKANOSSET RESERVOIR.

Keeper's salary	$181 50	
Care of reservoir and grounds, gate houses, etc.	153 33	
		$334 83

Hope Pumping Station.

Engineers	$1,066 68	
Firemen	480 00	
Nagle pumping engine	173 96	
Corliss pumping engine	148 65	
Lights	135 45	
Sundries	50 62	
Oil, waste and packing	45 56	
		$2,100 92

Hope Reservoir.

Care of reservoir and grounds, gate houses, etc.	$314 51	
Keeper's salary	272 25	
		$586 76

Pipe Line and Service Pipes.

Superintendence	$840 15	
Repairs	757 44	
Thawing pipes, hydrants, etc	111 35	
		$1,708 94

Meter Department.

Water meters	$2,210 16	
Setting and repairing meters	1,594 10	
Barn expenses	86 80	
Horse and wagon account	11 64	
		$3,902 70

Office.

Clerks' salaries	$1,866 54	
Secretary's salary	766 68	
Inspectors' salaries and expenses	689 68	
		$3,322 90

Miscellaneous.

Superintendent's clerks	$374 99
Water rebate	238 36
Horse hire	62 49
Real estate in Lincoln	47 00
Telephone lines	26 32

Pipe yard, office expenses	$25 00	
Sundries	18 92	
Public drinking fountains and troughs	16 75	
Analyses of water	6 40	
		$816 23
		$18,093 55

The amount of expenditures from January 1, to March 31, 1883, inclusive, was	$24,599 10
The total expenditures to March 31, 1883, inclusive, was	5,866,321 88
The net expenditure for construction and extension from January 1, to March 31, 1883. inclusive, was	6,194 86
The net expenditure for construction and extension to March 31, 1883, inclusive, was	4,885,161 59
The net expenditure for maintenance from January 1, to March 31, 1883, inclusive, was	16,763 44
The net expenditure for maintenance to March 31, 1883, inclusive, was	544,781 87

Bills deposited with the City Treasurer for collection from January 1, to March 31, 1883, inclusive, amounted to $207,547 94

As follows, viz. :

For water supplies	$203,962 44	
" water meters	1,923 50	
" setting and repairing meters	1,129 48	
" rent of real estate and sale of wood	361 61	
" permanently closing service stops	45 00	
" penalties	18 00	
" laying service pipes	91 71	
" rent of wharf	12 00	
" valve box frame	4 20	
		$207,547 94

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to..... ....$155,870 92
As follows, viz.:

For water supplies	$154,164 67
" water meters	845 50
" setting and repairing meters	292 23
" rent of real estate and sale of wood	167 38
" permanently closing stops	25 00
" cast iron water pipes	155 99
" laying water pipes	81 06
" laying service pipes	30 36
" post hydrants	74 00
" stop valve	15 00
" special castings	14 73
" rent of wharf	5 00
	$155,870 92

SEWERS.

March 15th the proposal of Manchester & Hudson to furnish, delivered in this city, three thousand feet 12 inch sewer pipe, six hundred and fifty feet 12 inch by 6 inch branches, six hundred feet 8 inch sewer pipe, one thousand one hundred feet 6 inch sewer pipe, 2 foot lengths, sixteen one-eighth 6 inch turns or bends, fifty 6 inch curved pipes, two hundred long bevel connections, six hundred 6 inch connection covers and forty-six flag stones for catch basins, was accepted, and on the 17th of the same month their offer to furnish 1,500,000 body bricks was also accepted. A contract has since been executed with said firm for furnishing the above named materials, the total amount of which is $17,934.04.

A contract dated March 17, 1883, has been executed with Herbert R. Horton to furnish the cement required for the season of 1883 for sewer construction, delivered upon the

work as required, the amount of which will depend largely upon the amount of work ordered by the City Council.

A contract dated March 16th, 1883, has been executed with Booth Brothers, of New London, Connecticut, for furnishing, delivered in this city, fifty-four sets of square catch-basin stones. Amount of contract, $1,485.00.

Assessments for the following sewers have been completed and certified to the City Treasurer:

Pitman street, from its present terminus in said street to tide water	$4,195 15
Conduit street, from Seekel street to Summer street, thence through Summer street to Meadow street, thence through Meadow street to Lockwood	3,387 25
Weeden street, from Atwell's avenue to Federal street	558 77
Marshall street, from Dawson street to Carpenter street	940 83
Linden and Pine streets, from Hayward street through Linden street to Pine, and through Pine street to the present terminus in Pine street	1,659 05
Angell street, from Diman place to Arlington avenue	3,161 45
Cargill street, from Fountain street to West st.	690 12
Transit street, from Ives street to Governor st.	1,065 00
North Main street, from Evergreen street to Livingston street	4,203 47
Total	$19,861 09

Seventeen drain-layers' licenses have been issued during the last quarter, all of which expire December 31, 1883.

Forty-one permits have been issued, seventeen for new work and twenty-four for extension of private drains.

The following is a list of sewers ordered to be constructed, work upon which had not been commenced January 1, 1883, viz.:

No.	Resolution.	Date of Approval.	
342.	Sept.	9, 1882,	*Stewart street, from Conduit street to a point opposite No. 85 Stewart st.*
397.	Oct.	7, 1882,	*Orms street from Carroll street to present end of sewer in Orms street.*
468.	Nov.	18, 1882,	*Transit street, from Governor street to East street.*
491.	Dec.	6, 1882,	*Lester street, from A street to present sewer at Saunders street.*
503.	Dec.	11, 1882,	*Pettis street and Nash lane, from Palmer street to Nichols street.*

The following work has been ordered during the last quarter.

58.	Feb.	17, 1883,	*Public street, from Broad street westerly to relieve street of surface water,*
69.	Feb.	28, 1883,	*Smith street, to relieve streets from surface water at junction of Orms and Candace streets.*

No actual work has been done during the last quarter in the construction of sewers.

The amount of bills approved on account of sewers from January 1, to March 31, 1883, inclusive, many of which were incurred prior to the commencement of the quarter, was:

For construction..... ....$2,754 60

Classified as follows:

Labor and materials for constructing sewers....	$2,243 96	
Rent of wharf and pipe yard.....	272 14	
Salaries	238 50	
		$2,754 60

For maintenance.... ....$4,268 87

Classified as follows:

Cleaning basins and sewers.....	$2,249 70	
Barn expenses.....	600 46	
Superintendent's salary.....	433 32	
Inspection of connections.....	333 32	
Cleaning and repairing old drains.....	205 76	
Tools.....	156 26	
Repairing basins and sewers.....	132 39	
Horses, wagons, carts, harnesses, etc.....	82 35	
Repairs on buildings.....	69 06	
Telephone lines.....	6 25	
		$4,268 87

The net expenditure for construction of sewers to March 31, 1883, inclusive, was....$1,575,960 11

The net expenditure for maintenance of sewers to March 31, 1883, inclusive, was.... $140,414 76

Bills deposited with the City Treasurer for collection, from January 1, to March 31, inclusive, amounted to.. $191 82

As follows, viz.:

For cleaning private drains.....	$109 33
For pumping water from gas well, etc.....	42 00
For filling cisterns.....	20 00
For rent of wharf.....	12 00
For material.....	8 49
	$191 82

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to..... $36 23

As follows, viz.:

For cleaning private drains.....	$27 25
For filling cisterns.....	4 00
For rent of wharf.....	4 98
	$36 23

1883.]

CITY DOCUME N T.

SECOND

QUARTERLY REPO

OF THE

BOARD OF PUBLIC

OF THE

CITY OF PROVIDENCE, R.

QUARTER ENDING JUNE 30,

PROVIDENCE:
PRINTED BY THE PROVIDENCE PRESS CO
1883.

SECOND

QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING JUNE 30, 1883.

PROVIDENCE:
PRINTED BY THE PROVIDENCE PRESS COMPANY.
1883.

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REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., July 2, 1883.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 207 of the ordinances, approved February 14, 1883, the Board of Public Works present, hereto annexed, its second quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, condition and cost of same for the quarter ending June 30, 1883.

CHARLES ANTHONY,
F. E. ANTHONY,
SAMUEL M. GRAY,
City Engineer,
Board of Public Works.

HIGHWAYS.

April 10, 1883, the offer of Booth Brothers to furnish five thousand feet of straight curbing was accepted. Amount of offer, $2,900.00.

May 21st, the offer of Garvey Brothers to furnish fifteen hundred feet of straight curbing and one thousand feet of eighteen-inch cross-walk stone was accepted. Amount of offer, $1,290.00.

The following work ordered by the City Council had not been commenced at the date of this report:

Sidewalks to be Curbed and Gutters Paved.

Date of Order.	
Dec. 15, 1881,	*Audrey street, from Bowdoin street to Delaine street.*
July 6, 1882,	*Holden street, from Beach street to Smith street.*
Aug. 3, "	*Capron street, in front of Julian street school-house estate.*
" " "	*Delaine street, from Audrey street to Appleton street.* (Order rescinded June 21, 1883.)
Oct. 19, "	*Clinton street, from Broad street to Prairie avenue.*
" " "	*Polk street, from Pettis street to Hedley street.*
" " "	*Potter's avenue, from Broad street to Greenwich street.*
" " "	*Providence street, from Dudley street to Pearl street.*
Nov. 16, "	*Mawney street, from Greenwich street to Updike street.*

Date of Order.	
Nov. 16, 1882,	*Transit street, from Governor street to Ives street.*
" " "	*Willard street, from Plain street to Eddy street.*
" " "	*Eddy street, from Thurber avenue to Pavilion avenue.*
Dec. 21, "	*Somerset street, from Friendship street to West Clifford street.*
" " "	*Clinton street, from Prairie avenue to Gay street.*
Jan. 18, 1883,	*Manning street, from Governor street to Gano street.*
April 19, "	*Adelaide avenue, from Broad street to Niagara street.*
" " "	*Somerset street, from West Clifford street to Providence street.*
May 17, "	*Lester street, south side, from Gilmore street to Harrison street.*
" " "	*Constitution street, from Lester street to Wilson street.*

To be Graded.

No. of Resolution.	Date of Approval.	
208	May 21, 1883,	*Branch avenue, from North Main street to Douglas avenue.*

Concrete Sidewalks.

Aug. 3, 1882,	*Julian and Capron streets, adjoining Julian street schoolhouse estate.*

Abate Nuisance on

No. of Resolution.	Date of Approval.	
218	May 20, 1882,	*Mitchell street, caused by overflow of surface water.*

Pave with Granite Blocks

476	Dec. 2, 1882,	*Chestnut street, from Bassett street to Elm street.*

Make Connection with Sewer

490	Dec. 6, 1882,	*At the corner of Arlington avenue and Angell street.*

To be Repaired.

Aug. 3, 1882. *Diman Place.*

The following work ordered by the City Council was in a state of progress as stated, at the date of this report:

Sidewalks to be Curbed and Gutters Paved.

Date of Order.	
Aug. 3, 1882,	*Africa street, from Tefft street to America street:*—completed except filling joints of gutter paving with asphaltic mixture.
July 6, "	*Bath street, from Chalkstone avenue to Orms street:*—curbing has been delivered on the street.
May 17, 1883,	*Benefit street, east side, from Burr's Lane to a point 182 feet southerly, and west side from range of south curb of North Main street to a point 203 feet southerly:*—roadway to be surfaced and rolled and sidewalks to be repaired.

Date of Order.	
June 16, 1881,	*Branch avenue, from North Main street, northerly, 1,466 lineal feet:*—foundation put in for pavement from North Main street 350 feet northerly.
July 6, 1882,	*Greenwich street, west side from Earl street to Reservoir avenue:*—circular curbing to be put in at Earl street, and two cross-walks to be relaid.
" " "	*Mawney street, from Bucklin street to Greenwich street:*—joints in gutter paving to be filled with asphaltic mixture.
" " "	*Moore street, from Greenwich street to Updike street:*—joints in gutter paving to be filled with asphaltic mixture.
May 17, 1883,	*North Main street, from junction of Mill street to the north curb of Olney street:*—roadway to be surfaced and rolled and sidewalks repaired.
Aug. 3, 1882,	*Tefft street, from Atwell's avenue to Federal street:*—joints of gutter paving to be filled with asphaltic mixture and cross-walk laid.
Dec. 21, "	*Wayland street, from Waterman street to Pitman street:*—curbing has been delivered on the street.

The following work ordered by the City Council has been completed:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of Order.	
Nov. 16, 1882,	*America street, east side, from Asia street to Africa street.*
Dec. 15, 1881,	*Hospital street, from Borden street to Lockwood street.*

Date of Order.	
Aug. 3, 1882,	*Lloyd street, from Prospect street to Thayer street.*
May 17, 1883,	*Olney street, north side, from east curb of North Main street to a point fifty-eight feet west of Prospect street and south side from one hundred and ninety-nine feet east of Prospect street to west curb line of Brown street.*
July 6, 1882,	*Reservoir avenue, west side, from Greenwich street to railroad bridge.*
Oct. 19, "	*Vinton street, from Atwell's avenue to Gesler street.*

GRADED.

May 17, 1883,	*Elmwood avenue, from railroad bridge to city line.*

REPAIRED.

Dec. 4, 1882,	*Farthing street, from Bridge street to South Water street.*

The following streets have been repaired during the last quarter:

Camp street, from Olney street to Larch street.
College street, from South Main street to Benefit street.
Fridenship street, from Richmond street to Chestnut street.
Gaspee street, from the railroad crossing to bridge over Woonasquatucket river.
Richmond street, from Friendship street to Broad street.
Waterman street, from North Main street to Benefit street.

Fifteen permits to open street were granted for various purposes.

The amount of bills approved on account of Highways, from April 1, to June 30, 1883, inclusive, was ..... $46,193.70.

Classified as follows:

Cleaning streets	$10,099 24	
Cleaning streets from ice and snow	46 23	
Repairing unpaved streets	2,242 52	
Repairing paved streets	220 31	
Labor and materials, crushed stone	3 331 15	
Labor on materials	1,775 26	
Barn expenses	2,089 26	
Stone, paving and crosswalk	5,513 23	
Horses, wagons, carts, harnesses, etc	1,484 08	
Blacksmith and wheelwright shop	1,201 59	
Labor and materials, harness shop	401 07	
Salaries, superintendent, clerks, and inspectors	875 99	
Tools, implements, etc	612 67	
Steam rollers, repairs and supplies	288 09	
Repairs on and renewals of stone crushers	282 41	
Watchman at city yard	196 00	
Labor and materials, fencing streets	63 16	
Office, city yard	14 36	
Telephone lines	4 81	
		$30,741 43

New Work Building and Rebuilding Streets, Including that Ordered by the City Council.

Waterman street, rebuilding	$235 11	
Senter street, grading	2,438 08	
Camp street, from Olney street, northerly	1,097 45	
Olney street, from North Main street, easterly, set curb and pave gutter	3,153 46	
North Main street, from Mill to Olney street, set curb and pave gutter	2,849 49	
Elmwood ave., from railroad bridge to city line, grading	1,527 63	
Moore street, from Greenwich street to Updike street, set curb and pave gutter	1,280 24	
Reservoir ave., west side, from Greenwich street to railroad bridge, set curb and pave gutter	397 80	
Hawkins street, from Admiral street to Branch ave., grading	370 61	
Tefft street, from Atwell's ave., to Federal street, curb and pave gutter	264 58	
Amounts carried forward	$13,614 45	$30,741 43.

Amounts brought forward	$13,614 45	$30,741 43
Africa street, from Tefft to America street, curb and pave gutter	176 79	
Greenwich street, from Earl street to Reservoir ave., curb and pave gutter	174 10	
Mawney street, from Bucklin street to Greenwich street, curb and pave gutter	593 62	
Vinton street, from Atwell's ave. to Gesler street, curb and pave gutter	283 83	
Benefit street, near junction North Main street, curb and pave gutter	149 32	
Lloyd street, from Prospect to Thayer street, curb and pave gutter	136 88	
Hospital street, from Borden street to Lockwood street, curb and pave gutter	130 38	
Branch ave., from North Main street, 1,466 feet northerly, curb and pave gutter	91 74	
Farthing street, repairing	85 34	
Bath street, from Chalkstone ave. to Orms street, curb and pave gutter	10 01	
Wayland street, from Waterman street to Pitman street, curb and pave gutter	5 81	
		$15,452 27
		$46,193 70

Bills deposited with the City Treasurer, for collection, from April 1, to June 30, 1883, inclusive, amounting to...$768.58.

As follows:

For street sweepings	$400 91
For labor and materials on streets	240 32
For manure from barn	71 25
For removing ashes from city hall	23 60
For pasturage, gravel lot	15 00
For chopping blocks	8 00
For granite blocks	6 50
For set of wheels	3 00
	$768 58

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to.....$6,336 99.

As follows:

For labor and materials on streets	$5,672 83
For street sweepings	454 99
For manure from barn	75 00
For removing ashes from city hall	42 40
For pasturage, gravel lot	30 00
For granite blocks	35 50
For chopping blocks	14 00
For sundries	7 27
For tools, etc	5 00
	$6,336 99

The amount of expenditures on account of sidewalks and curbing from April 1, to June 30, 1883, inclusive, amounted to..... $2,795.78.

During the quarter coupons from sidewalks and curbing bills collected have been returned by the City Treasurer, and receipted for, amounting to.....$4,300.22.

WATER WORKS.

April 10th, the offer of the Providence Coal Co., to do the teaming required by the Water and Sewer Departments for the season of 1883, for the sum of four $\frac{25}{100}$ dollars per day for double and three dollars for single teams, was accepted.

A lease of a portion of the Point Street Iron Works Wharf (so called,) has been executed with Robert B. Little for one year from April 1, 1883, at an annual rental of twenty-five hundred dollars, payable quarterly, with the privilege on the part of the city to continue said lease for a further term of two years.

June 1st, the proposal of Hopkins, Pomroy & Co. to furnish fifteen hundred tons of Delaware & Hudson Canal Co.'s egg coal, delivered at Pettaconsett Pumping Station, was accepted and a contract has since been executed with said firm for the delivery of the coal. Amount of contract,.....$7,425.00.

June 1st, the proposal of J. R. White & Son to furnish, delivered at Hope Pumping Station, two hundred tons stove and two hundred tons egg coal, was accepted. A contract has since been executed for its delivery. Amount of contract, ... $1,888.00.

June 13th, the offer of the estate of G. G. Hicks to furnish two thousand service box plugs of a new pattern was accepted. Amount of offer, ... $1,100.00.

The following is a list of water pipes ordered laid by the City Council prior to April 1, 1883, work upon which has not commenced on that date, viz. :

No. of Resolution.	Date of Approval.	
313.	Sept. 6, 1882,	**Reservoir avenue and Jordan street, from Fenner ave. to about 304 feet northerly from Reservoir ave.*
391.	Oct. 7, "	*North Main street, from Evergreen st. to Cemetery street.*
443.	Nov. 14, "	*D street, about 15 feet southerly from present end of pipe.*
444.	" " "	*East River street, from Waterman street southerly about 182 feet.*
467.	" 18, "	*Tockwotton street, from Gano street easterly about 200 feet.*
489.	Dec. 6, "	*Cypress and Olney streets, from East avenue to a point about 1,000 feet south of Cypress street in Olney street.*
499.	" " "	*Chalkstone and Home ave., from end of pipe in Chalkstone avenue to a point in Home avenue, about 50 feet northerly from Chalkstone ave.*
518.	" 20, "	*Valley street, from Bradley street to Zone street.*

*Work delayed by request of parties guaranteeing income upon the line.

No. of Resolution.	Date of Approval.	
532.	Dec. 21, 1882,	*Harlan street, Johnston, from Barrows street, easterly about 163 feet.*
533.	" " "	*McAvoy street, from Spruce street, northerly about 100 feet.*
91.	March 19, 1883,	*Blackstone street, from Prairie avenue about 166 feet westerly.*

During the last quarter, water pipes have been ordered laid in the following streets, viz.:

No. of Resolution.	Date of Approval.	
111.	Arpil 9, 1883,	*Burnett street, from Bucklin street, westerly about 280 feet.*
112.	" " "	*Douglas avenue, from present end of pipe northwesterly to O'Neil street.*
113.	" " "	*Fifield avenue, from Broad street, westerly about 1,275 feet.*
132.	" 23, "	*Adelaide avenue, from present end of pipe near Broad street, westerly about 125 feet.*
133.	" " "	*Bowdoin street, from present end of pipe southerly about 105 feet.*
134.	" " "	*Crary street, from present end of pipe easterly about 300 feet.*
135.	" " "	*Elmwood avenue, Cranston, from present end of pipe southerly about 920 feet.*
136.	" " "	*Gano street, from Wickenden street to Trenton street.*
137.	" " "	*Miner street, from present end of pipe northerly about 73 feet.*
154.	May 7, 1883,	*Africa street, from present end of pipe easterly about 38 feet.*
155.	" " "	*Barney street, from Dale street, westerly about 306 feet.*

No. of Resolution.	Date of Approval.	
156.	May 7, 1883,	*Barney street, from Dale street, easterly about 310 feet.*
157.	" " "	*Carter place, from Linton street, northerly about 143 feet.*
158.	" " "	*Colfax street from Ocean street to Plain street.*
159.	" " "	*Knightsville road, or Park avenue, Cranston, from Reservoir avenue to Narragansett Trotting Park.*
160.	" " "	*Knightsville road, or Park avenue, Cranston, from Reservoir avenue to Elmwood avenue.*
161.	" " "	*Latham street, Johnston, from Plainfield street to Lewis street, and in Lewis street westerly.*
162.	" " "	*Livingston street, from North Main street westerly about 335 feet.*
163.	" " "	*McDonough and Winsor streets, Johnston.*
164.	" " "	*Plainfield street, Johnston, from present end of pipe westerly about 82 feet.*
200.	" 21, "	*Calender and Mason streets, from present end of pipe in Calender street to a point about 200 feet south of Calender street.*
201.	" " "	*Ceylon street, from present end of pipe to Canton street.*
202.	" " "	*Handy street, from present end of pipe northerly about 65 feet.*
203.	" " "	*Regent and Robin streets, from present end of pipe to Allston street.*
206.	" " "	*Audrey street, from Bowdoin street to Delaine street.*
206.	" " "	*Holden street, from Beach street to Smith street.*

No. of Resolution.	Date of Approval.	
206.	May 21, 1883,	*Potter's avenue, from Broad street to Greenwich street.*
206.	" " "	*Somerset street, from Friendship street to West Clifford street.*
206.	" " "	*Wayland street, from Waterman street to Pitman street.*
206.	" " "	*Manning street, from Governor street to Gano street.*
226.	" " "	*Service pipe to Soldiers Monument, Exchange Place.*
243.	June 8, "	*Linwood avenue, from present end of pipe about 750 feet north-easterly.*
244.	" " "	*McAvoy street, between Atwell's avenue and Spruce street.*
245.	" " "	*Printery street, from Nash lane to Whelden street.*
266.	" 23, "	*Byfield street, from Eddy street about 300 feet westerly.*

During the quarter ending June 30, 1883, water pipes were laid as follows, viz.:

No. of Resolution.	Date of Approval.	
425.	Oct. 23, 1882,	*Vinton street, from present end of pipe in said street to Atwell's avenue:*—44 feet of six-inch pipes.
443.	Nov. 14, "	*D street, about 15 feet southerly from present end of pipe:*—16.8 feet of six-inch pipes.
444.	" " "	*East River street, from Waterman street, southerly about 182 feet:*—191.8 feet of six-inch pipes.
467.	" 18, "	*Tockwotton street, from Gano street easterly about 200 feet:*—153 feet of six-inch pipes.

No. of Resolution.	Date of Approval.	
489.	Dec. 6, 1882,	*Cypress and Olney streets, from East avenue to a point about 1,000 feet south of Cypress street in Olney street:*—1,024.5 feet of six and 476.8 feet of eight-inch pipes.
499.	" " "	*Chalkstone and Home avenues, from end of pipe in Chalkstone avenue to a point in Home avenue about 500 feet northerly from Chalkstone avenue:*—504.8 feet of six and 166 feet of twelve-inch pipes.
532.	" 21, "	*Harlan street, Johnston, from Barrows street easterly about 163 feet:*—163.4 feet of six-inch pipes.
533.	" " "	*McAvoy street, from Spruce street northerly about 100 feet:*—97.8 feet of six-inch pipes.
91.	March 19, 1883,	*Blackstone street, from Prairie avenue about 166 feet westerly:*—154.4 feet of six-inch pipes.
111.	April 9, "	*Burnett street, from Bucklin street westerly about 280 feet:*—284.9 feet of six-inch pipes.
112.	" " "	*Douglas avenue, from present end of pipe northwesterly to O'Neil street:*—805 feet of six-inch pipes.
113.	" " "	*Fifield avenue, from Broad street westerly about 1,275 feet:*—1,272.5 feet of eight-inch pipes.
133.	" 23, "	*Bowdoin street, from present end of pipe southerly about 105 feet:*—298.2 feet of six-inch pipes.
134.	" " "	*Crary street, from present end of pipe easterly about 300 feet:*—311.7 feet of twelve-inch pipes.

No. of Resolution.	Date of Approval.	
135.	April 23, 1883,	*Elmwood avenue, Cranston, from present end of pipe, southerly, about 920 feet:*—932.6 feet of eight-inch pipes.
136.	" " "	*Gano street, from Wickenden street to Trenton street:*—265.1 feet of six-inch pipes.
159.	May 7, "	*Knightsville road, or Park avenue, Cranston, from Reservoir avenue to Narragansett Trotting Park:*—2,160.9 feet of twelve-inch pipes.
160.	" " "	*Knightsville road, or Park avenue, Cranston, from Reservoir avenue to Elmwood avenue:*—603.6 feet of six-inch; 2.8 feet of eight-inch, and 4,282.7 feet of twelve-inch pipes.
162.	" " "	*Livingston street, from North Main street, westerly, about 335 feet:*—347 feet of six-inch pipes.
206.	" 21, "	*Wayland street, from Waterman street to Pitman street, and in Manning street, from Governor street to Gano street:*—869.3 feet of six-inch pipes.

Six fire hydrants have been set during the last quarter, one in each of the following locations:—

Douglas avenue, north-east corner of O'Neil street.

Fifield avenue, north-west corner of Savings street.

Fifield avenue, northerly side, about 460 feet westerly from Savings street.

Manning street, about half way between Ives and Gano streets.

Olney street, east side, opposite south line of Phillips street.

Olney street, east side, about 56 feet south of Howell street.

The total number of fire hydrants is now eleven hundred and ninety-two.

During the quarter ending June 30, 1883, one hundred and fourteen water meters have been set and the use of four discontinued. The following water meters were in use at the close of the quarter:

KIND.	SIZES.							Total.
	½ in.	¾ in.	1 in.	1½ in.	2 in.	3 in.	4 in.	
Ball & Fitts, Piston	2,861	551	127	48	7	1	.....	3,595
Ball & Fitts, Rotary	1	.....	23	25	3	7	3	62
Crown	896	153	51	16	4	1	.....	1,121
Fales, Jenks & Sons	312	209	20	3	9	.....	3	556
Worthington	158	.....	.....	.....	.....	.....	1	159
	4,228	913	221	92	23	9	7	5,493

Four plumbers' licenses were issued during the quarter, making the total number in force, June 30, 1883, fifty-five, all of which expire December 31, 1883.

Eight hundred and one permits were issued to plumbers for extensions and alterations in plumbing.

Two hundred and twenty-five applications for water have been made, making the total number, at the close of the quarter, eleven thousand eight hundred and thirty-seven.

The number of new service stops opened during the last quarter was one hundeed and ninety-seven. The total number

opened to June 30, 1883, inclusive, was eleven thousand one hundred and fifty-one. The number in actual use June 30, 1883, was ten thousand five hundred and seventy-nine.

The average daily consumption of water during the last quarter was 3,962,552 gallons.

The amount of bills approved on account of Water Works from April 1, to June 30, 1883, inclusive, was

For construction and extension $15,651 14

Classified as follows, viz:

Laying water pipes	$4,222 41
Fire hydrants, boxes and bolts	3,566 60
Cast-iron water pipes	2,821 94
Service pipe	1,551 97
Special castings	1,127 00
Laying service pipes	717 58
Removal of pipe yard	391 69
Stop valves	297 50
Horse and wagon account	257 30
Rent of wharf and pipe yard	235 24
Barn expenses	202 03
Wharf salaries	121 50
Labor on and carting pipes	113 38
Superintendent's clerk	25 00
	$15,651 14

For maintenance..... ....$12,016 25

Classified as follows, viz.:

PETTACONSET PUMPING STATION.

Coal and wood	$1,215 35
Sundries	889 60
Engineers	400 00
Firemen	281 72
Real estate, repairs, etc	199 97
Superintendence	166 66
New pumping works	164 53

Oil, waste and packing	$128 70	
Lights	113 58	
Labor on fuel	99 02	
Engine-house (Cornish)	75 75	
Care of grounds	68 25	
Corliss pumping-engine	51 75	
Barn expenses	32 06	
Expenses on surveys	16 00	
		$3,902 94

SOCKANOSSET RESERVOIR.

Keeper's salary	$91 50	
Care of reservoir and grounds, gate-houses, etc.	45 27	
		$136 77

HOPE PUMPING STATION.

Engineers	$533 34	
Coal and wood	293 88	
Firemen	240 00	
Lights	139 12	
Sundries	78 23	
Oil, waste and packing	44 47	
Engine-house	20 49	
Nagle pumping-engine	9 81	
Corliss pumping-engine	1 48	
		$1,360 82

HOPE RESERVOIR.

Keeper's salary	$137 25	
Care of reservoir and grounds, gate-houses, etc.	243 48	
		$380 73

PIPE LINE AND SERVICE STOPS.

Repairs	$463 86	
Superintendence, salaries and expenses	408 64	
		$872 50

METER DEPARTMENT.

Water meters	$2,360 84	
Setting and repairing meters	677 06	
		$3,037 90

OFFICE.

Clerks' salaries	$866 66	
Secretary's salary	383 34	
Inspectors' salaries and expenses	333 34	
		$1,583 34

MISCELLANEOUS.

Superintendent's clerks	$225 00	
Horse and wagon account	131 60	
Telephone lines	122 41	
Barn expenses	97 45	
Sundries	68 05	
Horse hire	62 49	
Public drinking fountains and troughs	15 25	
Pipe-yard, office expenses	12 50	
Analyses of water	6 50	
		$741 25
		$12,016 25

The amount of expenditures from April 1, to June 30, 1883, was	$27,667 39
The total expenditures to June 30, 1883, inclusive, was	5,893,989 27
The *net* expenditures for construction and extension from April 1, to June 30, 1883, inclusive, was	15,414 73
The *net* expenditures for construction and extension to June 30, 1883, inclusive, was	4,900,576 32
The *net* expenditures for maintenance from April 1, to June 30, 1883, inclusive, was	7,418 28
The *net* expenditures for maintenance to June 30, 1883, inclusive, was	552,200 15

Bills deposited with the City Treasurer for collection, April 1 to June 30, 1883, inclusive, amounted to $27,226 73

As follows, viz.:

For water supplies	$23,318 01
" water meters	2,309 00
" setting and repairing meters	841 50

For rent of real estate and sale of wood	$134 18
" grass, etc., from Hope reservoir	155 00
" permanently closing service stops	40 00
" manure from barn	17 10
" penalties	8 00
" laying service pipes	224 43
" laying water pipes	154 57
" cast-iron water pipe	21 03
" rent of wharf	3 25
" lead	66

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to $72,047 58

As follows, viz.:

For water supplies	$67,173 87
" water meters	2,626 50
" setting and repairing meters	1,588 02
" rent of real estate and sale of wood	323 45
" permanently closing stops	55 00
" penalties	24 00
" laying service pipes	136 39
" lead dross	51 63
" cast-iron water pipes	26 36
" wharfage	19 26
" manure from barn	17 10
" special castings	6 00
	$72,047 58

SEWERS.

Three drain-layers' licenses were issued, making the total in force at the close of quarter, twenty, all of which expire December 31, 1883.

One hundred and fifty-nine permits have been issued, ninety-three for new work and sixty-six for extension of private drains.

The following is a list of sewers ordered to be constructed, work upon which had not commenced June 30, 1883, viz.:

No. Resolution.	Date of Approval.	
342.	Sept. 9, 1882,	*Stewart street, from Conduit street to a point opposite No. 85 Stewart st.*
397.	Oct. 7, "	*Orms street, from Carroll street to present end of sewer in Orms street.*
468.	Nov. 18, "	*Transit street, from Governor street to East street.*
491.	Dec. 6, "	*Lester street, from A street to present sewer at Saunders street.*
503.	" 11, "	*Pettis street and Nash lane, from Palmer street to Nichols street.*
129.	April 23, 1883,	*Shove street, from Pettis street to Hedley street.*
130.	" " "	*Wilson and Greenwich streets, from a point in Wilson street about 125 feet west of Greenwich street, to present sewer in Greenwich street.*
165.	May 7, "	*Plain street, from Willard street to Blackstone street.*
166.	" " "	*Fulton street, from Union street to Eddy street.*
235.	June 8, "	*Clinton street, from Prairie avenue to Broad street.*
236.	" " "	*Holden street, from Beach street to Smith street.*
237.	" " "	*Manning street, from Gano street to Governor street.*
238.	" " "	*Pettis, Polk and Hedley streets, from summit in Pettis street to Shove street.*
239.	" " "	*Providence street, from Pearl street to Dudley street.*

No. of Resolution.	Date of Approval.	
240.	June 8, 1883,	*Willard and Eddy streets, from present sewer in Eddy street to Plain street.*
241.	" " "	*Codding street, from about 380 feet north of Cranston street to Cranston street.*
242.	" " "	*Cranston street, from Codding street to Pearl street.*
265.	" 23, "	*Hayward street, from Pearl street to about 160 feet easterly or northerly.*

The following is a list of other sewer work ordered by the City Council, the first two before and the other during last quarter, viz.:

No. Resolution.	Date of Approval.	
58.	Feb. 17, 1883,	*Public street, from Broad street, westerly, to relieve street of surface water.*
69.	" 28, "	*Smith street, to relieve streets from surface water at junction of Orms and Candace streets.*
131.	April 23, "	*Connections to be laid to curb line in North Main and Olney streets, from Mill street to Camp street.*
199.	May 21, "	*Culvert across Public street near Hamilton street.*

During the last quarter the work required to be done under the following resolutions has been completed, viz.:

No. of Resolution.	Date of Approval.	
69.	Feb. 28, 1883,	*Smith street, to relieve streets from surface water at junction of Orms and Candace streets.*
131.	April 23, "	*Connections to be laid to curb line in North Main and Olney streets, from Mill street to Camp street.*

Additional catch-basins have been constructed to relieve streets from surface water as follows, viz.:

Two on Branch avenue, near North Main street.
One on Lloyd street, corner of Hope street.

The amount of bills approved on account of sewers, from April 1, to June 30, 1883, inclusive, was:

For construction.....$7,801 71

Classified as follows, viz.:

Materials	$5,451 36
Rent of wharf and pipe-yard	272 14
Tools	424 53
Salaries	120 00
Connections in North Main and Olney streets	993 67
Smith street, junction Orms and Candace streets relieve from overflow	440 53
Additional catch-basins on completed sewers	99 48
	$7,801 71

For maintenance.....$5,613 49

Classified as follows, viz.:

Cleaning basins and sewers	$3,192 33
Cleaning and repairing old drains	728 85
Horses, wagons, carts, harnesses, etc.	659 94
Repairing basins and sewers	363 71
Superintendent's salary	216 66
Inspection of connections	166 66
Barn expenses	150 20
Tools	71 60
Repairs on buildings	33 44
Superintendent's clerk	25 00
Telephone lines	5 10
	$5,613 49

The *net* expenditure for construction of sewers to June 30, 1883, inclusive, was, ... $1,583,693 32
The *net* expenditure for maintenance of sewers to June 30, 1883, inclusive, was 145,714 28

Bills deposited with the City Treasurer for collection, from April 1, to June 30, 1883, inclusive, amounted to $338 99

As follows, viz.:

For cleaning private drains	$98 60
" private connections in North Main street	66 50
" pumping water from wells, etc	50 25
" horse	40 00
" filling cisterns	28 00
" manure from barn	25 65
" laying drain pipe, and furnishing pipe	20 04
" flag-stone	6 25
" wharfage	3 00
" broken glass	70
	$338 99

During the quarter, coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to $398 99

As follows:

For cleaning private drains	$153 68
" pumping water from wells, etc	55 64
" filling cisterns	42 00
" manure from barn	25 65
" private connections in North Main street	66 50
" material	25 47
" wharfage	18 00
" labor on private drains, etc	12 05
	$398 99

THIRD QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING SEPTEMBER 30, 1883.

PROVIDENCE:
PRINTED BY THE PROVIDENCE PRESS COMPANY.
1883.

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1905.

REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., October 1, 1883.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 207 of the ordinances, approved February 14, 1883, the Board of Public Works present, hereto annexed, its third quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, condition and cost of same for the quarter ending September 30, 1883.

Since their last quarterly report was presented, the Board have received, and herewith submit, the report of Professor John H. Appleton of Brown University, in charge of the analyses which have been made of the water supplied to the City of Providence, from the Pawtuxet river for the past eight years. This report gives the results of the analyses made, during that period, of a large number of samples of water taken both from the river and distribution, and also a comparative statement of the purity of the water supply of this and other cities.

CHARLES ANTHONY,
F. E. ANTHONY,
SAMUEL M. GRAY,
City Engineer,
Board of Public Works.

HIGHWAYS.

August 2, 1883, the offer of Booth Brothers to furnish, delivered in this city, one thousand feet of eighteen-inch cross-walk stone was accepted. Amount of offer $500.00.

The following work ordered by the Board of Aldermen and City Council had not been commenced September 30, 1883, viz :

Sidewalks to be Curbed and Gutters Paved.

Date of Order.	
Dec. 15, 1881,	*Audrey street, from Bowdoin street to Delaine street.*
July 6, 1882,	*Holden street, from Beach street to Smith street.*
Aug. 3, "	*Capron street, in front of Julian street school-house estate.*
Oct. 19, "	*Clinton street, from Broad street to Prairie avenue.*
" " "	*Polk street, from Pettis street to Hedley street.*
" " "	*Potter's avenue, from Broad street to Greenwich street.*
" " "	*Providence street, from Dudley street to Pearl street.*
Nov. 16, "	*Mawney street, from Greenwich street to Updike street.*
" " "	*Transit street, from Governor street to Ives street.*
" " "	*Willard street, from Plain street to Eddy street.*
" " "	*Eddy street, from Thurber's avenue to Pavilion avenue.*
Dec. 21, "	*Somerset street, from Friendship street to West Clifford street.*
" " "	*Clinton street, from Prairie avenue to Gay street.*

Jan. 18,	1883,	*Manning street, from Governor street to Gano street.*
April 19,	"	*Adelaide avenue, from Broad street to Niagara street.*
" "	"	*Somerset street, from West Clifford street to Providence street.*
May 7,	"	*Reservoir avenue, east side, from Greenwich street to the railroad bridge.*
" 17,	"	*Lester street, south side, from Gilmore street to Harrison street.*
" "	"	*Constitution street, from Lester street to Wilson street.*
June 21,	"	*Chestnut street, east side, from Elm street to a point 111 feet north of Elbow street, and west side, from Bassett street 40 feet northerly.*
July 19,	"	*Chalkstone avenue, from Charles street to Black street.*
" "	"	*Cypress street, from North Main street to Camp street.*
" "	"	*Delaine street, on south side, from the bridge near Audrey street, about 275 feet westerly, and on the north side from the said bridge to Appleton street.*
Sept. 20,	"	*D street, from Lester street to Booth street.*
" "	"	*Elmwood avenue, west side, from Atlantic street to Adelaide avenue.*
" "	"	*Greenwich street and Elmwood avenue, east side, from Potter's avenue to Adelaide avenue.*
" "	"	*Moore street, from Broad street to Updike street.*
" "	"	*Pike street, from South Main street to Benefit street.*
" "	"	*Taber avenue, from Angell street to a point 100 feet north of Humboldt avenue.*

Concrete Sidewalks.

No. of Resolution.	Date of Approval.	
	Aug. 3, 1882,	*Julian and Capron streets, adjoining Julian street school-house estate.*
312.	Sept. 4, "	*Thayer street, west side, from Charles Field street to George street.*
312.	" " "	*Lloyd street, from Prospect street to Thayer street.*

Abate Nuisance on.

218.	May 20, 1882,	*Mitchell street, caused by overflow of surface water.*

Pave with Granite Blocks.

476.	Dec. 2, 1882,	*Chestnut street from Bassett street to Elm street.*
363.	Sept. 26, 1883,	*Eddy street, from Westminster street to Fulton street.*

To be Repaired.

Aug. 3, 1882, *Diman Place.*

The following work was, September 30, 1883, in a state of progress as stated, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of Order.	
July 6, 1882,	*Bath street, from Chalkstone avenue to Orms street:*—finished except laying cross-walks.
Dec. 21, 1882,	*Wayland street, from Waterman street to Pitman street:*—curbing set, gutters paved and roadway partly graveled.

Date of Order.

July 19, 1883, *Beach street, south side, from Park street to the westerly line of Brown & Sharpe Manufacturing Co.:*—sidewalks curbed and gutters paved but roadway not graded.

Aug. 16, " *Vinton street, from Broadway to Carpenter street:*—street built with exception of portion between Brighton and Carpenter streets.

To be Repaired.

Sept. 6, 1883. *Dorrance, Pine and Orange streets, in the immediate vicinity of the estate of Edward S. Aldrich:*—about two-thirds finished.

To be Graded.

No. of Resolution. Date of Approval.

208. May 21, 1883, *Branch avenue, from North Main street to Douglas avenue:*—practically brought to curb grade from North Main street to Charles street.

The following work has been completed:

Sidewalks Curbed and Gutters Paved.

Date of Order.

Aug. 3, 1882, *Africa street, from Tefft street to America street.*

May 17, 1883, *Benefit street, east side, from Burr's lane to a point 182 feet southerly, and west side, from range of south curb of North Main street, to a point 203 feet southerly.*

June 16, 1881, *Branch avenue, from North Main street northerly 1,466 lineal feet.*

Date of Order.	
July 6, 1882,	*Greenwich street, west side, from Earl street to Reservoir avenue.*
" " "	*Mawney street, from Bucklin street to Greenwich street.*
" " "	*Moore street, from Greenwich street to Updike street.*
Aug. 3, 1882,	*Tefft street, from Atwell's avenue to Federal street.*
May 17, 1883,	*North Main street, from junction of Mill street to the north curb of Olney street.*
June 21, 1883,	*Waterman street, north side, from a point about 100 feet west of Prospect street, about 202 feet westerly.*
Sept. 6, "	*Waterman, corner of Brown street, in front of estate of Henry T. Beckwith.*

Sidewalks Concreted.

No. of Resolution.	Date of Approval.	
	Aug. 3, 1882,	*Amherst and Putnam streets, adjoining Putnam street fire engine station.*
447.	Nov. 14, 1882.	*Courtland street, from Penn street to Gesler street.*
447.	" " "	*Wayland street, on the west side, from Humboldt avenue, about 200 feet northerly.*
447.	" " "	*Dodge street, from High street to Cranston street.*
447.	" " "	*Harrison street, from High street to Cranston street.*
447.	" " "	*Pleasant street, from Camp street to Ivy street.*
447.	" " "	*Pond street, south side, from Winter street to Pearl street:* — completed by abutters.

No. of Resolution.	Date of Approval.	
312.	Sept. 4, 1883,	*Wayland avenue, west side, from estate of Estes Lamb to Humboldt avenue.*

MAKE CONNECTION WITH SEWER.

490.	Dec. 6, 1882,	*At the corner of Arlington avenue and Angell street.*

The following streets have been repaired during the last quarter:

Benefit street, from near junction of North Main street to India street.
Broad street, from city line to Public street.
College street, from College court westerly.
Chestnut street, from Ship street to Friendship street.
Dyer street, south of Dorrance street.
Friendship street, from Chestnut street to Richmond street.
Governor street, from George street to Manning street.
Gesler street, at gangway first west of Courtland street.
Harrison street, west side, at Wilson and Lester streets.
North Main street, west side, from Bowen street to Cady street.
Olney street, from angle near Morris avenue, easterly.
Richmond street, from Friendship street to Broad street.
Reservoir avenue, from Railroad bridge to Fenner avenue.
Wilson street, opposite No. 3.
Weybosset street, east side, from Post Office court to Dunwell's gangway.
Waterman street, from North Main street to Prospect street.
Water way, near junction Manton avenue and Atwell's avenue through land belonging to Salmon Brown estate.

The gravel lot on the west side of Eddy street about 90 feet south of Calla street, has been graded.

Fourteen permits to open streets were granted during the quarter.

During the quarter, bills for curbing set and unpaid, and for concreting sidewalks have been certified to the assessors of taxes as follows, viz.:

Curbing bills	$1,379 31
Concreting sidewalk bills	229 24

The amount of bills approved on account of Highways, from July 1, to September 30, 1883, inclusive, was, $54,269.98

Classified as follows:

Cleaning streets	$8,026 69	
Repairing unpaved streets	13,280 61	
Repairing paved streets	136 07	
Labor and materials, crushed stone	1,730 78	
Labor on materials	1,492 03	
Barn expenses	1,834 41	
Stone, paving and crosswalk	4,343 41	
Horses, wagons, carts, harnesses, etc.	1,253 83	
Tools, implements, etc.	3,651 59	
Salaries, superintendent, clerks and inspectors	1,647 37	
Blacksmith and wheelwright shop	1,592 33	
Steam rollers, repairs and supplies	583 98	
Watering streets	554 27	
Labor and materials, harness shop	387 27	
Repairs on, and renewals of stone crushers	338 46	
Watchman at city yard	196 10	
Telephone lines	101 54	
Sundries	80 99	
Labor and materials for fencing streets	54 19	
Office, city yard	7 49	
		$41,293 41
Amount carried forward		$41,293 41

Amount brought forward.....		$41,293 41

NEW WORK BUILDING AND REBUILDING STREETS, INCLUDING THAT ORDERED BY THE CITY COUNCIL.

SIDEWALKS CURBED AND GUTTERS PAVED.

Africa street, from Tefft street to America street,	$108 88	
Bath street, from Chalkstone avenue to Orms street,	554 30	
Beach street, south side, from Park street to land of Brown & Sharpe Manufacturing Co.....	68 54	
Benefit street, near junction with North Main street,	132 23	
Branch avenue, from North Main street, 1,466 feet northerly.....	5,404 68	
Greenwich street, from Earl street to Reservoir avenue.....	13 70	
Hospital street, from Borden street to Lockwood street.....	13 09	
Mawney street, from Bucklin street to Greenwich street.....	134 35	
Moore street, from Greenwich street to Updike street.....	207 56	
North Main street, from Mill street to Olney street,	1,054 85	
Olney street, from North Main street, easterly....	298 32	
Reservoir avenue, west side, from Greenwich street to railroad bridge.....	86 92	
Tefft street, from Atwell's avenue to Federal street,	122 85	
Vinton street, from Broadway to Carpenter street,	369 77	
Waterman street, corner Brown street, in front of estate of Henry T. Beckwith.....	96 59	
Waterman street, near Prospect street.....	60 00	
Wayland street, from Waterman street to Pitman street.....	502 60	
WORKED TO GRADE:		
Branch avenue, from North Main street to Douglas avenue.....	2,421 34	
Hawkins street, from Admiral street to Branch avenue.....	559 49	
REPAIRED:		
Dorrance, Pine and Orange streets, in the immediate vicinity of estate of Edward S. Aldrich,	390 13	
REBUILDING:		
Waterman street.....	376 38	12,976 57
		$54,269 98

The amount of bills approved on account of Highways during the fiscal year ending September 30, 1883, was $164,188.30.

Charged as follows:—

Cleaning streets	$23,665 70	
Repairs on unpaved streets	18 077 78	
Labor and material, crushed stone	12,577 65	
Stone. paving and crosswalk	17,061 20	
Barn expenses	8,664 22	
Cleaning streets from ice and snow	7,517 13	
Tools, implements, etc	6,590 72	
Labor on materials	6,052 50	
Blacksmith and wheelwright shop	5,059 17	
Salaries: superintendent, clerks and inspectors	4,527 59	
Horses, wagons, carts, harnesses, etc	3,501 43	
Repairs on, and renewals of stone-crushers	2,458 70	
Labor and material, harness shop	1,232 94	
Steam rollers, repairs and supplies	907 34	
Watchman at city yard	730 10	
Repairs on paved streets	714 74	
Watering streets	649 07	
Labor and materials, fencing streets	446 01	
Telephone lines	116 01	
Sundries	109 57	
Office, city yard	36 90	
		$120,696 47

NEW WORK BUILDING AND REBUILDING STREETS, INCLUDING THAT ORDERED BY THE CITY COUNCIL.

SIDEWALKS CURBED AND GUTTERS PAVED:—

Africa street, from Tefft street to America street,	$724 21	
America street, east side, from Asia street to Africa street	127 63	
Bath street, from Chalkstone ave. to Orms street,	564 31	
Beach street, south side, from Park street to land of Brown and Sharpe Manf'g Co	68 54	
Benefit street, near junc. with North Main street	281 55	
Branch avenue, from North Main street, 1,466 feet northerly	5,496 42	
Amounts carried forward	$7,262 66	$120,696 47

Amounts brought forward	$7,262 66	$120,696 47
Butler avenue, from South Angell street to Hawthorne avenue	10 20	
Butler avenue, east side, from Hawthorne avenue to north side of Blackstone park	3 00	
Courtland street, from Penn street to Gesler street	6 00	
Durfee street, from Dexter street to Parade street,	216 09	
East River and Waterman streets	1 80	
Fillmore street, from Douglas ave. to Oregon street	7 20	
Gallup street, from Plain street to Ocean street	463 03	
Greenwich street, west side, from Earl street to Reservoir avenue	187 80	
Holden street, from Beach street to Promenade street	62 97	
Holden street, from Brownell street to West Park street	60	
Hospital street, from Borden street to Lockwood street	143 47	
Lloyd street, from Prospect street to Thayer street	4,586 27	
Mawney street, from Bucklin street to Greenwich street	862 62	
Moore street, from Greenwich street to Updike street	1,487 80	
North Main street, from Branch avenue to Sexton street	407 85	
North Main street, from Mill street to Olney street	3,904 34	
Olney street, from North Main street, easterly	3,451 78	
Parade street, from High street to Cranston street	485 87	
Peck and Pine streets, around the estate of Charles D. W. and Henrietta K. Brownell	1 20	
Reservoir avenue, west side, from Greenwich street to railroad bridge	484 72	
Tefft street, from Atwell's avenue to Federal street	1,090 07	
Vinton street, from Broadway to Carpenter street,	369 77	
Vinton street, from Atwell's avenue to Gesler street	545 98	
Waterloo street, from Dexter street to Parade street	258 45	
Waterman street, near Prospect street	60 00	
Waterman street, corner of Brown street, in front of estate of Henry T. Beckwith	96 59	
Wayland avenue, west side, from Humbolt avenue, 300 feet northerly	1 80	
Wayland street, from Waterman street to Pitman street	508 41	
Amounts carried forward	$26,968 34	$120,696 47

Amounts brought forward	$26,968 34	$120,696 47

PAVED WITH GRANITE BLOCKS.

Manton avenue, from bridge to near Chaffee street	3 60	
North Main street, from Branch avenue to Sexton street	2,578 57	
North Main street, from Randall street to Branch avenue	552 52	

GRADED:

Branch avenue, from North Main street to Douglas avenue	2,421 34	
Elm street, from Eddy street to harbor line	3 00	
Elmwood avenue, from railroad bridge to city line	1,527 63	
Hawkins street, from Admiral street to Branch avenue	3,033 85	
Senter street	2,438 08	

REPAIRED:

Camp street, from Olney street northerly	1,097 45	
Dorrance, Pine and Eddy streets, in the immediate vicinity of estate of Edward S. Aldrich	390 13	
Farthing street	85 34	

REBUILT:

Waterman street	611 49	

MACADAMIZED:

Fountain street	1,480 27	

TAKE POSSESSION OF AND REMOVE IMPEDIMENTS:

Vinton street, from Gesler street to Atwell's ave.	300 22	
		43,491 83
		$164,188 30

Bills deposited with the City Treasurer for collection, from July 1 to September 30, 1883, inclusive, amounted to $730.46.

As follows :—

For labor and materials on streets	$476 13
For street sweepings	148 57
For manure from barn	75 00
For chopping blocks	24 75
For tools, etc	3 65
For paving and crosswalk stone	2 36
	$730 46

During the quarter, coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to $759 26

As follows :

For labor and materials on streets	$290 65
For paving and crosswalk stone	232 18
For street sweepings	156 78
For manure from barn	71 25
For chopping blocks	4 75
For tools, etc	3 65
	$759 26

The amount of expenditures on account of sidewalks and curbing from July 1 to September 30, 1883, inclusive, amouted to $6,289 08

During the quarter, coupons from sidewalks and curbing bills collected have been returned by the City Treasurer, and receipted for, amounting to $359 23

WATER WORKS.

August 3d, 1883, the offer of the Warren Foundry and Machine Co., of Phillipsburg, New Jersey, to furnish, delivered in this city, fifteen hundred feet of four-inch cast-iron water pipes, was accepted. Amount of offer, $504.00.

August 29th, the offer of Thomas Phillips & Co., to furnish five thousand pounds pure pig lead, was accepted. Amount of offer, $237.50.

September 8th, the offer of the Boston Machine Man'f'g. Co., to furnish, delivered in this city, fifteen one-inch taps, ten one-inch stops, one hundred five-eights-inch taps, fifty five-eighth-inch stops, four hundred one-half-inch taps and four hundred one-half-inch stops, was accepted. Amount, $928.75.

During the quarter ending September 30, 1883, water pipes were laid as follows, viz. :—

No. of Resolution.	Date of Approval.	
391.	Oct. 7, 1882.	*North Main street, from Evergreen street to Cemetery street:*—1,784.6 feet of twelve-inch pipes.
518.	Dec. 20, 1882.	*Valley street, from Bradley street to Zone street:*—2,888.6 feet of sixteen-inch pipes.
132.	April 23, 1883.	*Adelaide avenue, from present end of pipe near Broad street, westerly, about 125 feet:*—85.8 feet of six-inch pipes.
137.	" " "	*Miner street, from present end of pipe northerly, about 73 feet:*—73.3 feet of six-inch pipes.
154.	May 7, 1883.	*Africa street, from present end of pipe, easterly, about 38 feet:*—49.2 feet of six-inch pipes.
155.	" " "	*Barney street, from Dale street westerly, about 306 feet:*—306.1 feet of six-inch pipes.
156.	" " "	*Barney street, from Dale street easterly, about 310 feet:*—317.2 feet of six-inch pipes.
157.	" " "	*Carter place, from Linton street northerly, about 143 feet:*—148 feet of six-inch pipes.

No. of Resolution.	Date of Approval.	
158.	May 7, 1883.	*Colfax street, from Ocean street to Plain street:*—489.2 feet of six-inch pipes.
161.	" " "	*Latham street, Johnston, from Plainfield street to Lewis street, and in Lewis street, westerly:*—495.3 feet of six-inch pipes.
163.	" " "	*McDonough and Winsor streets, Johnston:*—290.6 feet of six-inch pipes.
164.	" " "	*Plainfield street, Johnston, from present end of pipe, westerly, about 82 feet:*—92.3 feet of eight-inch pipes.
200.	May 21, "	*Calender and Mason streets, from present end of pipe in Calender street, to a point about 200 feet south of Calender street:*—265.2 feet of six-inch pipes.
201.	" " "	*Ceylon street, from present end of pipe to Canton street:*—332 feet of six-inch pipes.
202.	" " "	*Handy street, from present end of pipe northerly, about 65 feet:*—75 feet of six-inch pipes.
203.	" " "	*Regent and Robin streets, from present end of pipe to Allston street:*—379.8 feet of six-inch pipes.
206.	" " "	*Audrey street, from Bowdoin street to Delaine street:*—371.4 feet of six-inch pipes.
206.	" " "	*Somerset street, from Friendship street to West Clifford street:*—123.5 feet of six-inch pipes.
206.	" " "	*Potter's avenue, from Broad street to Greenwich street:*—573.3 feet of six-inch pipes.

No. of Resolution.	Date of Approval.	
206.	May 21, 1883,	*Holden street, from Beach street to Smith street:*—429.6 feet of eight-inch pipes.
243.	June 8, "	*Linwood avenue, from present end of pipe about 750 feet northeasterly:*—743.8 feet of six-inch pipes.
244.	" " "	*McAvoy street, between Atwell's avenue and Spruce street:*—256.8 feet of six-inch pipes.
245.	" " "	*Printery street, from Nash lane to Whelden street:*—720.8 feet of six-inch pipes.
266.	" 23, "	*Byfield street, from Eddy street about 300 feet westerly:*—317 feet of eight-inch pipes.
276.	July 3, "	*Andrews avenue, Johnston, from Plainfield street to Waterman street, and in Waterman street about 200 feet westerly:*—495.7 feet of six-inch pipes.
290.	" 7, "	*Delaine street, from Appleton street easterly about 110 feet:*—137 feet of six-inch pipes.
291.	" " "	*Jewett street, from Senter street, westerly, about 193 feet:*—210.6 feet of six-inch pipes.
292.	" " "	*Providence street, from Dudley street northerly, about 73 feet:*—77.2 feet of six-inch pipes.
293.	" " "	*West street, from present end of pipe easterly, about 28 feet:*—36.8 feet of six-inch pipes.
300.	Sept. 4, "	*Salsbury street, Johnston, from Plainfield street southerly, about 216 feet:*—244.9 feet of six-inch pipes.

No. of Resolution.	Date of Approval.	
302.	Sept. 4, 1883,	*Redwing street, from Bucklin street, westerly, about 257 feet:*—267.2 feet of six-inch pipes.
303.	" " "	*Valley street, from Calais street, easterly, about 120 feet:*—123.5 feet of six-inch pipes.
313.	" " "	*Abbott street, from present end of pipe, easterly, about 163 feet:*—169 feet of six-inch pipes.
316.	" " "	*Pearl and Wellington streets, from present end of pipe to East Beacon street:*—459 feet of six-inch pipes.
318.	" " "	*Sullivan street, from present end of pipe, easterly, about 29 feet:*—36.5 feet of six-inch pipes.
319.	" " "	*Winslow place, from Broad street, northerly, about 238 feet:*—196 feet of six-inch pipes.
320.	" " "	*Woods avenue, from Park street, easterly, about 95 feet:*—101.4 feet of six-inch pipes.
360.	" 26, "	*Regent street, from Bryant street, westerly, about 96 feet:*—100.2 feet of eight-inch pipes.
384.	" " "	*Congress and Niagara streets:*—673 feet of eight-inch pipes laid in Congress street. *Hemlock street:*—16.1 feet of eight-inch pipes. *Woodland street:*—14.6 feet of six-inch pipes.

Length of 6-inch pipes laid during the quarter	8,665.7 feet.
Length of 8-inch pipes laid during the quarter	1,628.2 feet.
Length of 12-inch pipes laid during the quarter	1,784.6 feet.
Length of 16-inch pipes laid during the quarter	2,888.6 feet.
Total	14,967.1 feet.

or, 2.834 miles.

Statement of sizes and lengths of pipes laid since the commencement of the work :—

36-inch	10,084	feet.
30-inch	59,637	feet.
24-inch	23,942	feet.
20-inch	6,846	feet.
16-inch	31,574	feet.
12-inch	54,076.6	feet.
10-inch	14,758.1	feet.
8-inch	124,492.23	feet.
6-inch	585,266.19	feet.
*4-inch	3,719.3	feet.
Total	914,395.42	feet.

or, 173.18 miles.

The work of laying the following water pipes, completing the list ordered by the City Council, had not been commenced September 30, 1883, viz. :—

No. of Resolution.	Date of Approval.	
313.	Sept. 6, 1882,	†*Reservoir avenue and Jordan street, from Fenner avenue to about 304 feet northerly from Reservoir avenue.*
299.	" 4, 1883,	*Huntington avenue, from present end of pipe to Pearce avenue, and in Pearce avenue, northerly.*
301.	" " "	*Madison street, from Potter's avenue, southwesterly, about 389 feet.*

* At Pipe-yard, Roger Williams Park, and North Burial Ground.

† Work delayed by request of parties guaranteeing income upon this line.

No. of Resolution.	Date of Approval.	
314.	Sept. 4, 1883,	*Baker street, from Broad street, easterly, about 1,036 feet.*
315.	" " "	*Gano street, from Trenton street to Transit street.*
317.	" " "	*Fenner and Sampson avenues, from pipe in Fenner avenue, about 324 feet.*
348.	" 12, "	*Depot avenue, Cranston, from Cranston street to the railroad.*
349.	" " "	*Pavilion avenue, from present end of pipe, easterly, about 75 feet.*
359.	" 26, "	*Lewis street, Johnston, from present end of pipe, westerly about 134 feet.*
361.	" " "	*Whitmarsh street, from Broad street, westerly, about 286 feet.*
373.	" " "	*Briggs street, from present end of pipe, easterly, about 215 feet.*
374.	" " "	*Cabot street, from present end of pipe, northerly, about 150 feet.*
375.	" " "	*Cady street, from Broad street, westerly, about 1,250 feet.*
383.	" " "	*Branch avenue, from present end of pipe to Douglas avenue.*
384.	" " "	*Congress and Niagara streets,:—* That portion in Niagara street to be laid.
385.	" " "	*Delahunt street, from Veazie street, westerly, about 426 feet.*
386.	" " "	*Jewett street, from present end of pipe, westerly, about 209 feet.*

Seven fire hydrants have been set during the last quarter, one in each of the following locations:—

Audrey street, west side, about half way between Delaine and Bowdoin streets.

Ceylon street, northeast corner of Canton street.

Holden street, northeast corner of Beach street,

Holden street, east side, half way between Brownell and Woodland streets.

Printery street, east side, about 407 feet north of Nash lane.

Valley street, half way between Cornell and Hemlock streets.

Valley street, southwest corner of Hemlock street.

The total number of fire hydrants is now eleven hundred and ninety-nine.

During the quarter ending September 30, 1883, one hundred and twenty-eight water meters have been set and the use of ten discontinued. The following water meters were in use at the close of the quarter :—

KIND.	SIZES.							Total.
	⅝ in.	¾ in.	1 in.	1½ in.	2 in.	3 in.	4 in.	
Ball & Fitts, Piston	2,860	550	128	48	7	1	.....	3,594
Ball & Fitts, Rotary	1	.....	23	26	3	7	3	63
Crown	1,004	164	53	19	4	1	1	1,246
Fales, Jenks & Sons	311	208	20	3	9	.....	3	554
Worthington	153	.....	.....	.....	.....	.....	1	154
	4,329	922	224	96	23	9	8	5,611

Four plumber's licenses were issued during the quarter, making the total number in force September 30, 1883, fifty-nine, all of which expire December 31, 1883.

Seven hundred and six permits to do plumbing work were issued during the quarter.

Two hundred and nineteen applications for water have been made, making the total number at the close of the quarter, twelve thousand and fifty-six.

The number of new service stops opened during the last quarter was two hundred and twenty-eight.

The total number opened to September 30, 1883, inclusive, was eleven thousand three hundred and seventy-nine. The number in actual use September 30, 1883, was ten thousand and eight hundred.

The average daily consumption of water during the last quarter was 5,046,163 gallons.

The amount of bills approved on account of Water Works, from July 1 to September 30, 1883, inclusive, was

For construction and extension $13,980 30

Classified as follows, viz. :—

Cast-iron water pipes	$7,556 66
Laying water pipes	3,081 90
Laying service pipes	847 51
Special castings	789 31
Rent of wharf and pipe yard	625 00
Labor on and carting pipes	440 87
Wharf salaries	242 00
Barn expenses	200 00
Stop valves	143 65
Superintendent's clerk	41 66
Horse and wagon account	11 74
	$13,980 30

For maintenance $27,050 69

Classified as follows, viz. :

PETTACONSET PUMPING STATION.

Coal and wood	$2,646 24
Engineers	800 00
Sundries	757 57
Firemen	540 00

Superintendence	$333 32	
Real estate, repairs, etc	294 66	
Oil, waste and packing	239 79	
Corliss pumping engine	192 02	
Lights	183 23	
New pumping works	168 39	
Care of grounds	141 55	
Labor on fuel	61 70	
Stable expenses	45 00	
Engine house (Cornish)	20 90	
Expenses on surveys	13 56	
		$6,437 93

SOCKANOSSET RESERVOIR.

Keeper's salary	$183 00	
Care of reservoir and grounds, gate houses, etc.	109 93	
		$292 93

HOPE PUMPING STATION.

Coal and wood	$1,976 40	
Corliss pumping engine	1,202 52	
Engineers	1,066 68	
Firemen	480 00	
Lights	193 72	
Oil, waste and packing	94 53	
Sundries	50 79	
Engine house	34 05	
Nagle pumping engine	42	
		$5,099 11

HOPE RESERVOIR.

Care of reservoir and grounds, gate houses, etc.	$706 78	
Keeper's salary	285 00	
		$991 78

PIPE LINE AND SERVICE STOPS.

Repairs	$2,102 16	
Superintendence, salaries and expenses	800 00	
		$2,902 16

METER DEPARTMENT.

Water meters	$3,448 71	
Setting and repairing meters	1.764 71	
		$5,213 42

OFFICE.

Clerks' salaries	$1,733 32	
Secretary's salary	766 68	
Inspectors' salaries and expenses	666 68	
		$3,166 68

MISCELLANEOUS.

Professional services, arrangement of grounds at Pettacouset and Sockanosset	$1,054 00	
Analyses of water	754 50	
Superintendent's clerks	456 24	
Telephone lines	224 07	
Barn expenses	120 41	
Horse hire	91 32	
Ascertaining and removing nuisances on Pawtuxet river	77 75	
Horse and wagon account	69 74	
Sundries	59 20	
Public drinking fountains and troughs	25 45	
Pipe yard office expenses	14 00	
		$2,946 68
		$27,050 69

The amount of expenditures from July 1 to September 30, 1883, inclusive, was	$41,030 99
The total expenditures to September 30, 1883, inclusive, was	5,935,020 26
The *net* expenditures for construction and extension from July 1 to September 30, 1883, inclusive, was	13,068 60
The *net* expenditures for construction and extension to September 30, 1883, inclusive, was	4,913,644 92
The *net* expenditures for maintenance from July 1 to September 30, 1883, inclusive, was	23,076 85
The *net* expenditures for maintenance to September 30, 1883, inclusive, was	575,277 00

Bills deposited with the City Treasurer for collection, from July 1 to September 30, 1883, inclusive, amounted to $15,022 90

As follows, viz. :—

For water supplies	$6,962 42
" water meters	2,944 50
" setting and repairing meters	931 37
" rent of real estate, etc	240 52
" old iron, copper, etc	45 30
" repairing hydrants	25 25
" permanently closing service stops	25 00
" penalties	10 00
" labor and materials laying water pipes	2,827 60
" cast-iron water pipe	418 79
" fire hydrants	300 00
" labor and materials laying service pipes	292 15
	$15,022 90

During the quarter, coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to.... ... $29,999 14

As follows, viz. :—

For water supplies	$25,121 70
" water meters	2.757 00
" setting and repairing meters	874 76
" rent of real estate and sale of wood	255 68
" old metal	45 30
" permanently closing service stops	25 00
" penalties	8 00
" cast-iron water pipe	419 55
" labor and material laying service pipe	248 43
" stop valves	94 00
" labor and materials laying water pipes	149 72
	$29,999 14

SEWERS.

July 20, 1883, the proposal of Manchester & Hudson to furnish, delivered in this city, twelve hundred feet 15-inch sewer-pipe, one hundred feet 15-inch by 12-inch branches, three hundred feet 15-inch by 6-inch branches, one hundred feet 15-inch by 8-inch branches, three thousand feet 12-inch

pipes, two hundred feet 12-inch by 8-inch branches, one thousand feet 12-inch by 6-inch branches, six hundred feet of 8-inch pipe, forty 8-inch bends, fifty bevel connections, 8-inch, one thousand six-inch covers, and twenty-five flagstones for catch-basins, was accepted. A contract has since been executed with said firm, the total amount of which is $5,149.75.

August 11th, a contract was executed with Booth Brothers, of New London, Conn., to furnish, delivered in this city, twenty-five square catch-basin stones. Amount of contract $725.00.

August 1st, contracts for the construction of sewers, which have since been signed, were awarded as follows, viz.:

[The amounts given below are what it is estimated will be paid the contractors for labor and does not include the cost for inspection and materials.]

To John Keogh.

No. of Resolution.	Date of Approval.		Amount.
503.	Dec. 11, 1882,	*Pettis street and Nash lane, from Palmer street to Nichols street.....*	$901 25
238.	June 8, 1883,	*Pettis, Polk and Hedley streets, from summit in Pettis street to Shove street.....*	876 35
129.	April 23, "	*Shove street, from Hedley street to Nash lane...*	592 00
236.	June 8, "	*Holden street, from Smith street to Beach street..*	1,785 75

To A. F. Williams & Co.

No. of Resolution.	Date of Approval.		Amount.
274.	July 3, 1883,	*Hopkins street, from Benefit street to South Main street, and in South Main street, from Crawford street to College street*	$1,425 05
242.	June 8, "	*Cranston street, from Codding street to Pearl street*	1,493 85
165.	May 7, "	*Plain street from Willard street to Blackstone street*	466 50
240.	June 8, "	*Willard and Eddy streets, from Plain street to Blackstone street*	2,131 40
130.	April 23, "	*Wilson and Greenwich streets*	1,025 70

To James J. Newman.

275.	July 3, 1883,	*Hospital street, from South street to Elm street*	273 85
237.	June 8, "	*Manning street, from Governor street to Gano street*	1,626 10
342.	Sept. 9, 1882,	*Stewart street, from opposite No. 85 to Conduit street*	420 00
468.	Nov. 18, "	*Transit street, from East street to Governor street,*	486 60
491.	Dec. 6, "	*Lester street, from A street to Saunders street,*	424 05

No. of Resolution.	Date of Approval.			Amount.
265.	June	23, 1883,	*Hayward street, from Lockwood street to Pearl street*....	221 40
235.	"	8, "	*Clinton street, from Broad street to Prairie avenue*.....	2,391 20
239.	"	8, "	*Providence street, from Dudley street to Pearl street*.....	1,380 44
241.	"	8, "	*Codding street, from Builder's Iron Foundry to Cranston street,*	492 65
166.	May	7, "	*Fulton street, from Union street to Eddy street*..	246 40

All the proposals for constructing sewer in *Orms street, from Carroll street to the end of the sewer at east side of railroad bridge*, opened same day, were rejected, it being understood that the railroad company contemplate widening their road-bed and building a new bridge.

Two drain layer's licenses were issued, making the total in force at the close of the quarter twenty-two, all of which expire December 31, 1883.

One hundred and fifty-seven permits have been issued to drain layers. Ninety-six for new work and sixty-one for extension of private drains.

During the last quarter the work of constructing the following sewers has been completed, viz.:

No. of Resolution.	Date of Approval.		
342.	Sept.	9, 1882,	*Stewart street, from opposite No. 85 to Conduit street.*
491.	Dec.	6, "	*Lester street, from A street to present end of sewer at Saunders street.*

No. of Resolution.	Date of Approval.	
503.	Dec. 11, 1882,	*Pettis street and Nash lane, from Palmer street to Nichols street.*
129.	April 23, 1883,	*Shove street, from Pettis street to Hedley street.*
130.	" " "	*Wilson and Greenwich streets, from a point in Wilson street about 125 feet west of Greenwich street to present sewer in Greenwich street.*
235.	June 8, "	*Clinton street, from Prairie avenue to Broad street.*
238.	" " "	*Pettis, Polk and Hedley streets, from summit in Pettis street to Shove street.*
265.	" 23, "	*Hayward street, from Pearl street to about 160 feet easterly or northerly.*
273.	July 3, "	*Hopkins street, from Benefit street to South Main street, and in South Main street, from Crawford street to College street.*

The following work has also been completed :—

58.	Feb. 17, 1883,	*Public street, from Broad street, westerly, to relieve street of surface water.*
199.	May 21, "	*Culvert across Public street, near Hamilton street.*

Additional catch-basins have been constructed to relieve streets from surface water, as follows, viz. :—

One on North Main street, at Benefit street.
One at the corner of Richmond and Friendship streets.
Two on Branch avenue, near Thurber's lane.
One on Summer street, at Meadow street, and
One on Orange street, near Pine street.

The following sewers are being constructed :—

No. of Resolution.	Date of Approval.	
236.	June 8, 1883,	*Holden street, from Beach street to Smith street.*
239.	" " "	*Providence street, from Pearl street to Dudley street.*
240.	" " "	*Willard and Eddy streets, from present end of sewer in Eddy street to Plain street.*

Work upon the following sewers, completing the list ordered by the City Council, had not commenced September 30, 1883, viz. :—

No. of Resolution.	Date of Approval.	
397.	Oct. 7, 1882,	*Orms street, from Carroll street to present end of sewer in Orms street.*
468.	Nov. 18, "	*Transit street, from Governor street to East street*, contracted for.
165.	May 7, 1883,	*Plain street, from Willard street to Blackstone street*, contracted for.
166.	" " "	*Fulton street, from Union street to Eddy street*, contracted for.
237.	June 8, "	*Manning street, from Gano street to Governor street*, contracted for.
241.	" " "	*Codding street, from about 380 feet north of Cranston street to Cranston street*, contracted for.
242.	" " "	*Cranston street, from Codding street to Pearl street*, contracted for.
274.	July 3, "	*Hospital street, from Elm street to South street*, contracted for.
364.	Sept. 26, "	*Wickenden street, from Ann street to Hope street.*
382.	" " "	*John street, from Brook street to Thayer street.*

The amount of bills approved on account of sewers, from July 1 to September 30, 1883, inclusive, was:

For construction..... $25,264 70

Expended as follows. viz. :—

For materials	$13,463 35
" tools	1.019 29
" rent of wharf and pipe yard	625 00
" sundries	213 55
" clerks' salaries	209 16
" testing cement	83 12
" sewer in Cinton street, from Broad street to Prairie avenue	2,459 29
" sewer in South Main and Hopkins streets	1,443 35
" sewer in Greenwich and Wilson streets	1,128 40
" sewer in Pettis street and Nash lane	977 46
" sewer in Polk and Hedley streets	940 40
" sewer in Shove street from Hedley street to Nash lane	674 16
" sewer in Lester street, from A street to Saunders street	453 71
" sewer in Stewart street, from Conduit street, southerly	449 37
" sewer in Willard and Eddy streets	264 81
" sewer in Hayward street, from Lockwood street to Pearl street	246 36
" sewer in Holden street, from Smith street to Beach street	155 02
" sewer in Providence street, from Dudley street to Pearl street	67 81
" additional catch-basins on completed sewers.	286 50
" Broad street, corner Public street, relieve from overflow of surface water	85 09
" Smith street, junction Orms and Candace streets, relieve from overflow of surface water	13 50
" connections in North Main and Olney streets.	6 00
	$25,264 70

For maintenance..... $6,990 67

Charged as follows, viz. :—

Cleaning basins and sewers	$3,649 65
Repairing basins and sewers	702 24
Cleaning and repairing old drains	552 03
Tools	501 68
Salaries, superintendent and clerk	489 56
Barn expenses	379 85
Inspection of connections	333 32
Horses, wagons, carts, harnesses, etc.	270 68
Telephone lines	67 73
Sundries	43 93
	$6,990 67

The *net* expenditures for construction of sewers to September 30, 1883, inclusive, was $1,608,777 45

The *net* expenditure for maintenance of sewers to September 30, 1883, inclusive, was 152,593 95

Bills deposited with the City Treasurer for collection, from July 1 to September 30, 1883, inclusive, amounted to $150 63

As follows, viz. :—

For cleaning private drains	$82 00
" filling cisterns	46 00
" labor, supplying water for Dexter Asylum	12 63
" pumping water from cellars	10 00
	$150 63

During the quarter, coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to $217 79

As follows, viz. :—

For cleaning private drains	$116 25
" pumping water from wells, etc.	49 50
" filling cisterns	32 00
" furnishing and laying drain pipe	20 04
	$217 79

APPENDIX.

REPORT

ON THE

CONDITION OF THE PAWTUXET WATER,

BY

JOHN HOWARD APPLETON,

Professor of Chemistry in Brown University.

REPORT

OF

PROFESSOR JOHN HOWARD APPLETON.

To the Board of Public Works, Providence:

Gentlemen:—I propose in this report to present in a convenient and popular form some of the results of my examinations of the water of the Pawtuxet river as supplied to the city of Providence.

My analyses of this water have continued for a term of nearly eight years; a few analyses were made in the year 1875, and then, beginning with the year 1876, the water has been tested regularly twice a month up to the present time. For this series of tests, the water has been obtained from the river itself, near the in-take of the Pettaconset pumping station. At certain irregular intervals, however, the water has been tested from the distribution pipes of the city of Providence.

PURPOSES OF THESE TESTS.

In having these tests made it has been the intention of the Water board and the Board of public works to keep a vigilant watch over the quality of our water at its source of supply, and also to keep a permanent record of the results.

The superior softness of our water, whereby it is so excellent for washing purposes, is readily recognized by all users; and again its fitness for use in steam boilers has been beyond question. For the variety of other business uses to which it is put, it is acknowledged to be admirably fitted. While then, my tests had reference to the qualities which

adapt it to these uses, I have given special attention to those which applied in any way to its fitness for drinking and cooking purposes.

In case of nearly every sample a series of six tests has been applied. Notwithstanding this number of tests it cannot be denied that chemistry finds one of its most difficult problems in the question—Is a certain given sample of water fit to drink? Some of the sources of this difficulty will be now stated.

THE SOLVENT POWER OF WATER.

One of the most important of the properties of water is its solvent power. Thus it is capable of dissolving greater or less amounts of a large proportion of all the substances known. Now in nature, water is constantly progressing from stage to stage in a sort of circulation, in course of which there are frequent opportunities for the water to exert its solvent power upon the substances with which it comes in contact. For example, the atmospheric air is permeated with water in the form of an almost invisible vapor, and this vapor is readily condensed into the liquid drops of rain; now, while these drops are at first pure water—that is consist of absolutely nothing else but water—they do not long remain so. In falling, they begin to dissolve substances they meet in the air during their downward progress. Upon reaching the earth, portions, at least, of them flow from the surface into larger bodies of water, as rivers for example; other portions soak into the ground and flow beneath the surface toward wells or other subterranean reservoirs. In either case the water takes into solution certain substances with which it comes into contact in the earth; indeed the water that flows into rivers carries to them in addition various floating solid matters that hang suspended in it and cannot be said to be ever properly dissolved in it. These matters are carried to the ocean, whence great quantities of pure water evaporate into the atmosphere, ready upon proper occasion to begin again the round we have

briefly pictured. Of course the substances left behind in the ocean, serve in some degree to increase the impurities already gathered in it.

RARITY OF PERFECTLY PURE WATER.

So it appears that in nature it is difficult to find anywhere, water that is perfectly pure; in fact it is no easy matter for the chemist to prepare—even by the most skilfully devised artificial processes—absolutely pure water, that is water in which he cannot detect some substances dissolved. And thus it occurs that the principal differences between natural waters arise from variations in the kind, character, and amount of the impurities that they contain. Of course it is plain that the word impurity may be used in two widely different senses; in the chemical sense it is not intended to convey any suggestion other than that of some substances different from water itself, dissolved or suspended in the latter; in the every-day sense, the word impurity appears to carry the impression that the thing referred to possesses some foul or unwholesome quality. It is evident then that two different samples of drinking water may contain substances which the chemist would designate as impurities, of which those in the one sample may be harmless or even beneficial, while those in the other may be highly injurious to health.

THREE CLASSES OF WATERS.

Of course the chemist encounters a class of waters, the members of which are extremely unwholesome; they contain mineral substances well known to be injurious or they are charged with animal matters in a recognizable condition of putrefaction. He also meets another class which are in the opposite extreme: it consists of waters of marked degree of purity, almost entirely free from mineral and organic matters of any kind.

Evidently, then, it is in waters of a third class that the

chemist finds difficulty in forming a correct opinion. These may contain, in moderate quantities, impurities which in larger amounts would be plainly unwholesome.

Here, then, must be met the not uncommon difficulty of adopting some definite point, in a continuous series of numbers, at which it will be decided that all less quantities are harmless and all greater quantities are dangerous.

Again it is difficult to experimentally determine the effects of samples of water of this third class upon individuals using them; for initial physical condition, the articles of food of a more decided character, as well as various other circumstances make it hard to fix any given effect as distinctly referable to the use of water of this class.

METHOD OF THIS REPORT.

In this report, I propose to dwell mainly upon two kinds of tests that have been applied to the Pawtuxet water.

The one test gives us the *total amount of solids* yielded upon evaporation of the water—a very general sort of test; the other gives us the amount of *albuminoid ammonia* yielded by the water—a very special sort of test.

In discussing each kind of matter I intend to refer to the amount of it in the water supplied to other cities and also in the water supplied to the city of Providence for the last eight years.

In my references to other cities I compare the waters by means of the tests made by Professor Albert R. Leeds, of Hoboken, N. J. In the months of June and July, 1881, this gentleman, one of the most eminent of American chemists, was called upon to examine the waters of the Passaic river which supply the cities of Newark, Jersey City and Hoboken. He obtained in addition, samples of water from a number of the principal cities of the Union (but not including Providence) and tested them. His results were intended to be compared with each other; they may be fairly compared also with those of tests of the water of the city of Providence made at that time in accord-

ance with our custom. While it is probable that the water of some of these cities may have been better at some other dates than at those chosen by Professor Leeds, and the same is known to be the fact in case of the Providence water, viz.: that on many occasions, both before and since, it has been better than in June and July, 1881, yet on the whole, the report of Professor Leeds affords the best means of comparison of city waters to which I have been able to gain access.

TABLE I. TOTAL SOLIDS IN PAWTUXET AND OTHER WATERS.

The amount of total solids in a water is learned by evaporating a measured quantity of the water in a suitable weighed dish; the water then goes off as steam while there is left behind in the dish, as a residue, every solid substance that was either floating in the water or was dissolved in an invisible condition within it. Upon taking the weight of such residue, we obtain an outside datum which is a very valuable one, since it tells us at once whether a water is grossly polluted or not. Now I have prepared table I. for the purpose of displaying both the absolute and the relative amounts of total solids in our water supply.

This table expresses throughout the *number of parts*, by weight, of total solids that the various kinds of water referred to yield *per million parts of water*, also by weight; moreover the kinds of water are in all cases placed in the order of their amounts of impurities—those having the least impurity coming at the top.

First. Column one (table I.) shows the total solids existing in waters furnished to certain of the principal cities of the United States in June and July, 1881.

The list will be found to include the following important municipalities:—

New York, (population by census of 1880)	1,206,299
Philadelphia,	847,170
Brooklyn,	566,663
Boston,	362,839
Baltimore,	332,313
Cincinnati,	255,139
Washington,	147,293
Jersey City,	120,722
Providence,	104,857
Rochester,	89,366
Paterson,	51,031
Wilmington,	42,478
Hoboken,	30,999
Oswego,	21,116

This column also contains the results of the analysis of one sample of water from the Providence *distribution pipes* which was taken incidentally on June 8, 1881.

From this column it appears that at the comparison dates the Providence supply, both in the river and in the distribution pipes, had a smaller amount of total solids than had any of the other cities mentioned; so far then, it must be credited with a higher degree of purity than any of them.

Second. Professor Leeds also examined waters from the sources of the Boston supply; for purposes of comparison with the water of our own source, I have placed the result from the Boston sources in the second column. It is plain that so far as this datum is concerned the Boston sources are far below our own in purity.

Third. The results in the first and second columns may be said to refer to one particular period or occasion; in the third column therefore I give a resumé of the results obtained in case of the Pawtuxet water upon nearly two hundred different occasions and covering a period of about eight years.

From this column it appears that the average amounts of total impurities in our source of supply for each and every one of the last eight years—and consequently for the whole of them—was much less than in the purest of the other city waters upon the comparison dates.

The third column of table I. is one of averages. Now it may be said of averages that *they sometimes flow from the improper combination of discordant extremes* and thus become meaningless or misleading. In order to try the Pawtuxet averages just given, upon this point, I have introduced column four in which is given the very largest amounts of total solids found in the water upon any occasion during the last eight years—those in which we have had a critical examination of it. The figures of this column clearly show that our averages are not open to the objection suggested; for the variations have been extremely moderate; and even at the times of largest amounts our water compares favorably with that of the other cities at the comparison dates.

Fourth. Columns five and six of table I. relate to waters from the Providence distribution pipes. They display the results of tests of nearly twenty samples of water tested in the last few months of the year 1882 and in the first few months of the year 1883.

If we except numbers 14 and 21, which I am informed came from points entirely inaccessible to consumers, we find that the average amount of total solids is slightly less in these samples tested from the distribution, than the average amount in water taken at the same period from the river.

TABLE II. ALBUMINOID AMMONIA IN PAWTUXET AND OTHER WATERS

This table needs less explanation than table I. because the principles guiding in its arrangement are the same as in that one. The fact must not be overlooked however that *in this table the numbers represent amounts only one one-hundredth*

as great as in the other—namely, they represent *hundredths of one part* of albuminoid ammonia by weight *in one million parts of water*, also by weight.

Again the substance—albuminoid ammonia—which forms the subject of the table demands some comment. As has been already suggested some of the matters dissolved in water defy the attempts of the chemist to definitely characterize them. Thus it is often impossible to declare the presence of animal matter upon the basis of any direct test. Hence recourse must be had to an indirect one. The test based upon albuminoid ammonia is that which is almost universally adopted as the best at present known. The term implies that kind of ammonia which is produced by the natural or artificial decomposition of animal matters — and in some cases of vegetable—of which albumen is taken as the type. In testing water, the chemist subjects it to a process which will develop ammonia from all of the matters present, capable of this change; then he finds out with exactness the quality of ammonia so formed. The value of this test is enhanced by the fact that the process used—called Nessler's test—is one of the most delicate known to science. *On the other hand, as has been acknowledged, certain harmless animal and vegetable matters may by this method be counted as dangerous ones. But as this course keeps us on the safe side it is usually adhered to, and the test for albuminoid ammonia is considered one of the most important.*

First. Column I. (table II.) shows that the amounts of albuminoid ammonia, of the principal city waters compared, group themselves mostly in a space between the numbers $\frac{18}{100}$ and $\frac{88}{100}$.

At approximately the same dates, the three tests of the Providence sources all came well up in this space, while the sample from our distribution was surpassed by only one, and that one, much the best of all those compared.

Second. Column II. (table II.) shows that at the com-

parison dates, the Boston sources were all of them inferior to ours.

Third. Column III. (table II.) shows that for a period of eight years the average amounts of albuminoid ammonia per year, have been between $\frac{16}{100}$ and $\frac{25}{100}$; that is, always above the middle of the group already referred to; and further, column IV. shows that these averages are legitimately derived and are not merely the results of calculations from remote extremes.

Fourth. Columns V. and VI. (table II.) show the amounts of albuminoid ammonia in the samples of water from the Providence distribution in 1882 and 1883.

If we except numbers 14 and 21, which I have remarked came from points entirely inaccessible to consumers, we discover that the average amount is $\frac{18}{100}$, an amount much less than the average ($\frac{25}{100}$) in the water taken directly from the river at the same period.

CONCLUSIONS.

The results given and the explanations added, appear then to show conclusively that our water is one of the best; that it is not now grossly polluted and has not been so since our critical knowledge of it; that there is no distinct ground for decided complaint of its quality nor for fear with regard to its use.

These statements are of course based largely upon its analytical returns as compared with those of other cities. But is comparison valuable in such a case? I think it is; and that for two reasons. First, in the matter of water supply there exists no *absolute* standard of fitness; thus we are necessarily shut up to comparison. Second, cities must get their water from natural terrestrial sources (not from ideal or supernal ones); now when a careful search for good water is prosecuted by a large number of communities, especially by those possessing well-ordered, healthy, intelligent and opulent populations, it may be fairly assumed that

some among them will discover superior sources o
So that if the Providence water were now, or ever
in the inferior condition some persons have ima
would not be able to take the high position among
American cities, that it properly secures in the tab
with presented.

To the conclusions already stated, I wish to add t
fication. So far as *any* pollution of our water s
known to be in progress now or at any future time,
to be arrested. While notwithstanding some diffe
opinion, it is generally admitted that even sewage
erate quantities is often oxidized and rendered har
flowing streams, it is also universally accepted that
wise nor right to allow such contamination to go o
cover of a reliance upon the unremitting purifyi
cesses of nature.

Again, in matters of health we ought not to be
with a fair position or even a good one; a city like
dence ought to demand the very best. I believe, th
that unceasing efforts ought to be made to preserve t
tuxet water supply free from every sort and kind of
ity that may be liable to get into it.

Respectfully submitted,

JOHN HOWARD APPLET

Brown University,

Providence, September, 1883.

90.

Jersey City V 93.0
Baltimore 94.0

Jersey City VII 97.0
" " VIII 100.0
100. Wilmington 100.0
Rochester 100.0

Jersey City X 105.0

No. 14 95.0
" 21 97.0

90.

100.

170.

170.

180. Oswego 180.0

180.

310.0 down
(or 27.9 inches)

Pegan Brook 490.0

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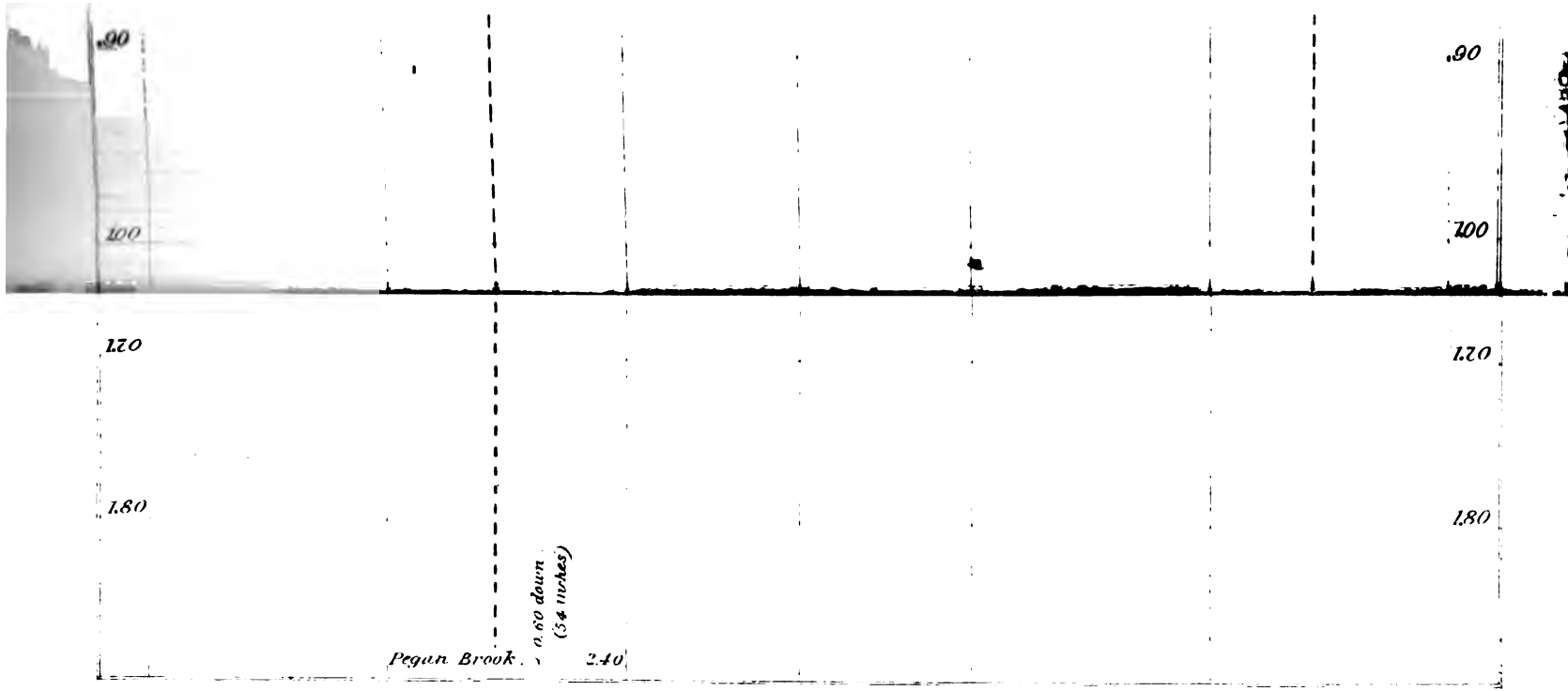

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FOURTH QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WO

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING DECEMBER 31, 188

PROVIDENCE:
PROVIDENCE PRESS COMPANY, PRINTERS TO THE CITY.
1884.

FOURTH QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING DECEMBER 31, 1883.

PROVIDENCE:
PROVIDENCE PRESS COMPANY, PRINTERS TO THE CITY.
1884.

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REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., January 1, 1884.

TO THE HONORABLE THE CITY COTNCIL:

In compliance with the requirements of Chapter 207 of the ordinances, approved February 14, 1883, the Board of Public Works present, hereto annexed, its fourth quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, condition and cost of same for the quarter ending December 31, 1883.

The board have also to report that during the quarter the water in Sockanosset and Hope reservoirs has been drawn off, the small deposit of sediment found was removed, and the reservoirs refilled. While the reservoirs were being cleansed and refilled, both the Worthington and Cornish Engines were put in service, and found to be in satisfactory condition.

CHARLES ANTHONY,
F. E. ANTHONY,
SAMUEL M. GRAY,
City Engineer,
Board of Public Works.

HIGHWAYS.

October 8th, 1883, the offer of Booth Brothers to furnish delivered in this city, five thousand feet of straight curbing, was accepted. Amount of offer, $2,900.00.

During the quarter ending December 31, 1883, the following work has been completed, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of Order.	
Dec. 15, 1881,	*Audrey street, from Bowdoin street to Delaine street.*
June 21, 1883,	*Chestnut street, east side, from Elm street, to a point 111 feet north of Elbow street, and west side, from Bassett street 40 feet southerly.*
July 6, "	*Bath street, from Chalkstone avenue to Orms street.*
" 19, "	*Beach street, south side, from Park street to the westerly line of Brown & Sharpe Manufacturing Co.*
" " "	*Delaine street, on south side, from the bridge near Audrey street, about 275 feet westerly, and on the north side from the said bridge to Appleton street.*

Pave with Granite Blocks.

No. of Resolution.	Date of Approval.	
476.	Dec. 2, 1882,	*Chestnut street, from Bassett street to Elm street.*

CONCRETE SIDEWALKS.

No. of Resolution.	Date of Approval.	
312.	Sept. 4, 1882,	*Thayer street, west side, from Charles Field street to George street.*
312.	" " "	*Lloyd street, from Prospect street to Thayer street.*

TO BE REPAIRED.

Sept. 6, 1883, *Dorrance, Pine and Orange streets, in the immediate vicinity of the estate of Edward S. Aldrich.*

BRIDGE OVER GUTTERS REMOVED.

Nov. 15, 1883, *Atwell's avenue, in front of estates of James McCarron and John B. Hennessey.*

OBSTRUCTIONS REMOVED.

Dec. 13, 1883, *Potter street, wooden obstructions built across the sidewalk, opposite premises leased by Freeman & Francis.*

Work has been done during the last quarter in the following streets, viz.:

Admiral street, from Loveday street to the city line:—roadway graveled and gutter opened near Loveday street.

Angell street, at Stimpson avenue:—new cross-walk laid and curb returns put in.

Appleton street, from Young street to Delaine street:—brought to grade as changed by board of aldermen, June 21, 1883.

Atwell's avenue, from Knight street to Merrill street:—roadway rebuilt and gutters repaved.

Beach street, corner of Park street:—cross-walk relaid.

Broadway, from Barton street to Sabin street:—roadway re-surfaced with broken stone.

Brook street, at George street:—new cross-walk laid.

Cove street, near Washington street:—driveway put in.

Douglas avenue, from Vale street to Admiral street:—roadway graveled.

Douglas avenue, from Veazie street, to a point 1000 feet south:—gutter paved on west side.

Eddy street, from Broad street to Pine street:—pavement repaired.

Eddy street, near Pine street and near Washington street:—driveways put in.

Hope street, near Lloyd street:—driveway put in.

Hopkins street, from South Main street to Benefit street:—roadway repaired.

Lloyd street, near Hope street:—driveway put in.

Manton avenue, at Bosworth street:—new cross-walk laid and curb-returns put in.

Olney street, from Morris avenue to a point 1000 feet east:—gutter paved, roadway re-surfaced and culvert put in.

Orms street, near Charles street:—driveway put in.

Plain street, from Friendship street to Public street:—roadway graveled.

Prairie avenue, from Thurber's avenue to Point street:—roadway graveled.

Smith street, from Orms street to Chalkstone avenue:—roadway graveled.

Steeple street, corner of Canal street:—cross-walk repaired.

Tobey street, near Broadway:—driveway put in.

Thayer street, from Charles Field street to George street:—curb reset and gutter repaved on west side.

Updike street, from Moore street to Public street:—gutter opened on west side to convey water from Moore street.

Veazie street, from Loveday street to Douglas avenue:—paved on east side and roadway graveled.

Walker street, from Washington street to Fountain street:—roadway repaired.

Walling street, near Pettis street:—new cross-walk laid.

Waterman street, from Prospect street to Wayland street:—roadway graveled.

Wickenden street, from Brook street to East street:—roadway repaired with broken stone.

The following work was, December 31, 1883, in a state of progress as follows, viz. :—

SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of Order.

Dec. 21, 1882, *Wayland street, from Waterman street to Pitman street:*—street built except laying cross-walks.

Aug. 16, 1883, *Vinton street, from Broadway to Carpenter street:*—the portion between Broadway and Carpenter street has been built.

Oct. 18, 1883, *Branch avenue, from a point three hundred feet south of Smithfield avenue to a point one hundred and fifty feet west of Opper street:*—finished except graveling, and paving a portion of the roadway and putting in cross-walk at West River street.

Nov. 15, 1883, *Branch avenue on the north side thereof, from Slocum street, so called, to the bridge over the West river, and on the south side of said*

Branch avenue, from said Slocum street to Vanderwater street:—the greater portion on the north side of the street has been curbed and the gutters paved.

Concrete Sidewalks and Curb same.

Date of Order.

Oct. 4, 1883, *North Main and Mill streets, at Fire Station:*—finished except concreting sidewalk on North Main street.

To be Repaired.

Aug. 3, 1882, *Diman place:*—the obstructions have been removed, and a greater portion of the street has been brought to curb grade.

To be Graded.

No. of Resolution. Date of Approval.

208. May 21, 1883, *Branch avenue, from North Main street to Douglas avenue:*—practically brought to curb grade from North Main street to Veazie street.

Obstructions to be Removed.

Date of Order.

Oct. 4, 1883, *Branch avenue, from Smithfield avenue to Douglas avenue:*—a portion of the obstructions have been removed.

The following work ordered by the Board of Aldermen and City Council had not been commenced December 31, 1883, viz.:—

SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of Order.		
July	6, 1882,	*Holden street, from Beach street to Smith street.*
Aug.	3, "	*Capron street, in front of Julian street school-house estate.*
Oct.	19, "	*Clinton street, from Broad street to Prairie avenue.*
"	" "	*Polk street, from Pettis street to Hedley street.*
"	" "	*Potter's avenue, from Broad street to Greenwich street.*
"	" "	*Providence street, from Dudley street to Pearl street.*
Nov.	16, "	*Mawney street, from Greenwich street to Updike street.*
"	" "	*Transit street, from Governor street to Ives street.*
"	" "	*Willard street, from Plain street to Eddy street.*
"	" "	*Eddy street, from Thurber's avenue to Pavilion avenue.*
Dec.	21, "	*Somerset street, from Friendship street to West Clifford street.*
"	" "	*Clinton street, from Prairie avenue to Gay street.*
Jan.	18, 1883,	*Manning street, from Governor street to Gano street.*
April	19, "	*Adelaide avenue, from Broad street to Niagara street.*
"	" "	*Somerset street, from West Clifford street to Providence street.*
May	7, "	*Reservoir avenue, east side, from Greenwich street to the railroad bridge.*

Date of Order.		
May 17,	1883,	*Lester street, south side, from Gilmore street to Harrison street.*
" "	"	*Constitution street, from Lester street to Wilson street.*
July 19,	"	*Chalkstone avenue, from Charles street to Black street.*
" "	"	*Cyress street, from North Main street to Camp street.*
Sept. 20,	"	*D street, from Lester street to Booth street.*
" "	"	*Elmwood avenue, west side, from Atlantic street to Adelaide avenue.*
" "	"	*Greenwich street and Elmwood avenue, east side, from Potter's avenue to Adelaide avenue.*
" "	"	*Moore street, from Broad street to Updike street.*
" "	"	*Pike street, from South Main street to Benefit street.*
" "	"	*Taber avenue, from Angell street to a point 100 feet north of Humboldt avenue.*
Oct. 18,	"	*Arnold street, from East street to Governor street.*
" "	"	*Manning street, from Hope street to Thayer street.*
" "	"	*Warren street, from Fuller street to Dexter street.*
Nov. 15,	"	*Cromwell street, from Greenwich street to Dexter street.*
" "	"	*Pearl street, from Beacon street to Plain street.*
" "	"	*Wellington street, from East Beacon street to Pearl street.*
Dec. 31,	"	*Dexter street, from Cranston street to Cromwell street.*

CONCRETE SIDEWALKS.

No. of Resolution.	Date of Approval.	
	Aug. 3, 1882,	*Julian and Capron streets, adjoining Julian street school-house estate.*
437.	Nov. 7, 1883,	*Messer street, from High street to Cranston street.*
480.	" 24, "	*Olive street, north side, from Prospect street to Thayer street.*

ABATE NUISANCE ON.

218.	May 20, 1882,	*Mitchell street, caused by overflow of surface water.*

PAVE WITH GRANITE BLOCKS.

363.	Sept. 26, 1883,	*Eddy street, from Westminster street to Fulton street.*

TO BE REPAIRED.

	Nov. 15, 1883,	*Gangway on the northerly side of Fire Station, between Mill and North Main streets, and also the steps known as "Thurber's steps."*

TO BE BROUGHT TO GRADE.

	Nov. 15, 1883,	*Highway, at corner of Dyer and Pine streets.*
	Dec. 27, "	*Highway, adjacent to estate of Wanton Durfee and Humphrey Almy, on Dyer and Custom House streets.*

WALL TO BE REBUILT.

	Nov. 15, 1883,	*In front of estate of William Gallagher, on Branch avenue.*

Ten permits to open streets were granted during the quarter.

The amount of bills approved on account of Highways, from October 1, to December 31, 1883, inclusive, was $49,905.57.

Classified as follows:

Cleaning streets	$5,105 60	
Repairing unpaved streets	7,949 57	
Repairing paved streets	208 29	
Paving stone and crosswalk stone	5,752 13	
Labor and materials, crushed stone	4,252 08	
Barn expenses	1,962 19	
Salaries, superintendent, clerk and inspector	1,063 24	
Blacksmith and wheelwright's shop	995 51	
Labor on materials	837 47	
Cleaning streets from ice and snow	729 56	
Tools, implements, etc	673 18	
Horses, wagons, carts, harnesses, etc,	621 54	
Repairs on stone crushers	602 91	
Labor and materials, harness shop	313 59	
Watchman at city yard	168 00	
Steam rollers, repairs and supplies	111 21	
Labor and materials, fencing streets	78 68	
Sundries	65 07	
Repairing sidewalks	21 20	
Office, city yard	14 25	
		$31,525 27

NEW WORK BUILDING AND RE-BUILDING STREETS, INCLUDING THAT ORDERED BY THE CITY COUNCIL.

SIDEWALKS CURBED AND GUTTERS PAVED.

Audrey street, from Bowdoin street to Delaine street,	$547 15	
Branch avenue, from near Smithfield avenue to near Opper street	3,750 66	
Bath street, from Chalkstone avenue to Orms street,	96 43	
Beach street, south side, from Park street to land of Brown & Sharpe Manufacturing Co	135 82	
Branch avenue, from Slocum street to Vandewater street	200 99	
Amounts carried forward	$4,731 05	$31,525 27

Amounts brought forward	$4,731 05	$31,525 27
Chestnut street, from Elm street to Bassett street	141 82	
Delaine street, from the bridge to Appleton street	538 00	
Moore street, from Greenwich street to Updike street	71 12	
North Main street, from Mill street to Olney street	3 00	
Wayland street, from Waterman street to Pitman street	312 61	
SET CURB AND CONCRETE SIDEWALKS.		
Mill street, in front of city fire station	155 83	
WORKED TO GRADE:		
Branch avenue, from North Main street to Douglas avenue	2,237 69	
Hawkins street, from Admiral street to Branch avenue	94 68	
REPAIRED:		
Diman place	514 96	
Dorrance, Pine and Orange streets, in the immediate vicinity of estate of Edward S. Aldrich	134 24	
MAKE CONNECTION WITH SEWER:		
Arlington avenue, corner of Angell street	29 00	
MACADAMIZED:		
Atwell's avenue	8,588 07	
PAVE WITH GRANITE BLOCKS:		
Chestnut street, from Bassett street to Elm street	828 23	
		18,380 30
		$49,905 57

Bills deposited with the City Treasurer for collection, from October 1, to December 31, 1883, inclusive, amounted to $1,071.17.

As follows:

For street sweepings	$592 20
For labor and materials on streets	299 04
For paving and crosswalk stone	82 33
For manure from barn	75 00
For tools, etc	19 60
For chopping blocks	3 00
	$1,071 17

During the quarter coupons for bills collected have been returned by the City Treasurer, and receipted for, amounting to $904 75

As follows:

For street sweepings	$503 11
For labor and materials on streets	177 27
For manure from barn	150 00
For stone, paving and crosswalk	37 77
For chopping blocks, etc	22 00
For tools, etc	14 60
	$904 75

The amount of expenditures on account of sidewalks and curbing from October 1, to December 31, 1883, inclusive, amounted to $5,517 53

Bills deposited with the City Treasurer for collection, on account of sidewalks and curbing, from October 1 to December, 31, 1883, inclusive, amounted to $66 83

During the quarter coupons from sidewalks and curbing bills collected, have been returned by the City Treasurer, and receipted for, amounting to $180 52

WATER WORKS.

December 10, 1883, the offer of L. H. Tillinghast & Co. to furnish, delivered in this city, three thousand pounds of pig lead and ten thousand pounds of lead pipe of various sizes, was accepted. Amount of offer, $720.00.

By authority of Resolution No. 288, approved July 7, 1883, the board, on December 6, 1883, authorized the payment of the sum of twenty-five hundred dollars to the "Barden Reservoir Co." This company has recently completed the construction of a reservoir, of the capacity of six hundred million gallons, at Ponaganset, in Scituate, on the

north branch of the Pawtuxet river. Previous to filling the reservoir, the company, under the direction of the board, removed the trees and cut and burned the underbrush on the land to be flowed, for the purpose of preventing injury to the quality of the water from the decay of vegetable matter.

November 13, 1883, the board, as directed by Resolution No. 403, approved October 6, 1883, authorized the payment of seven thousand dollars to the Pawtuxet Water Pipe Co., this company having executed a conveyance to the city, satisfactory to the City Solicitor, of all its water pipes, hydrants, fixtures, connections, etc., and of all its right, title and interest, in and to the same, and in and to its franchise, and all rights acquired under its charter.

During the quarter ending December 31, 1883, water pipes were laid as follows, viz. :—

No. of Resolution.	Date of Approval.	
299.	Sept. 4, 1883,	*Huntington avenue, from present end of pipe to Pearce avenue, and in Pearce avenue, northerly:*—314.3 feet of six-inch pipes.
301.	" " "	*Madison street, from Potter's avenue, southwesterly, about 389 feet:*—413.7 feet of six-inch pipes.
314.	" " "	*Baker street, from Broad street, easterly, about 1,036 feet:*—1.007.3 feet of six-inch pipes.
315.	" " "	*Gano street, from Trenton street to Transit street:*—235 feet of six-inch pipes.
317.	" " "	*Fenner and Sampson avenues, from pipe in Fenner avenue, about 324 feet:*—13 feet of twelve-inch and 344 feet of six-inch pipes.

No. of Resolution.	Date of Approval.	
348.	Sept. 12, 1883,	*Depot avenue, Cranston, from Cranston street to the railroad:*—367.1 feet of six-inch pipes.
349.	" " "	*Pavilion avenue, from present end of pipe, easterly, about 75 feet:*—73.4 feet of six-inch pipes.
359.	" 26, "	*Lewis street, Johnston, from present end of pipe, westerly about 134 feet:*—153.9 feet of six-inch pipes.
361.	" " "	*Whitmarsh street, from Broad street, westerly, about 286 feet:*—276.7 feet of six-inch pipes.
373.	" " "	*Briggs street, from present end of pipe, easterly, about 215 feet:*—196.4 feet of six-inch pipes.
374.	" " "	*Cabot street, from present end of pipe, northerly, about 150 feet:*—146.6 feet of six-inch pipes.
375.	" " "	*Cady street, from Broad street, westerly, about 1,250 feet:*—1,267 feet of six-inch pipes.
383.	" " "	*Branch avenue, from present end of pipe to Douglas avenue:*—2,543.3 feet of six-inch pipes.
384.	" " "	*Congress and Niagara streets:*—409.2 feet of six-inch pipes laid in Niagara street; the pipes in Congress street having been previously laid.
385.	" " "	*Delahunt street, from Veazie street, westerly, about 426 feet:*—438.3 feet of six-inch pipes.
386.	" " "	*Jewett street, from present end of pipe, westerly, about 209 feet:*—205.1 feet of six-inch pipes.

No. of Resolution.	Date of Approval.	
393.	Oct. 4, 1883,	*Harvest street, from present end of pipe to Harold street:*—85.7 feet of six-inch pipes.
418.	" 17, "	*Cole street, ninth ward from Prairie avenue to Levina street:*—320.1 feet of six-inch pipes.
419.	" " "	*Crocker avenue, from present end of pipe to Burrington street, and in Burrington street, from Crocker avenue to Pacific avenue:*—152.1 feet of six-inch, and 783.5 feet of eight-inch pipes.
428.	" 23, "	*Home avenue, from present end of pipe, northerly, about 195 feet:*—195.6 feet of six-inch pipes.
430.	" " "	*Princeton street, Johnston, from Vine street, westerly, about 160 feet:*—173 feet of six-inch pipes.
431.	" " "	*Willow place, from Willow street, southerly, about 201 feet:*—208.4 feet of six-inch pipes.
444.	Nov. 7, "	*Horton place, from Linton street, northerly, about 173 feet:*—184.5 feet of six-inch pipes.
471.	" 24, "	*Cole street, from end of pipe to Levina street, and in Levina street, northerly:*—251.8 feet of six-inch pipes.
472.	" " "	*Grosvenor street, from Chalkstone avenue, northerly, about 235 feet:*—248 feet of six-inch pipes.
474.	" " "	*Roanoke street, from Pemberton street, about 180 feet, westerly:*—185.2 feet of six-inch pipe.

No. of Resolution.	Date of Approval.	
475.	Nov. 24, 1883,	*Vandewater street, from present end of pipe, easterly, about 300 feet:*—291.2 feet of six-inch pipes.
525.	Dec. 20, "	*Wild street, from Branch avenue, northerly, about 781 feet:*—29.8 feet of six-inch pipes only laid.

Length of 6-inch pipes laid during the quarter	10.716.7 feet
Length of 8-inch pipes laid during the quarter	783.5 feet.
Length of 12-inch pipes laid during the quarter	13. feet.
Total	11,513.2 feet.

or, 2.181 miles.

Statement of sizes and lengths of pipes laid since the commencement of the work:—

36-inch	10,084	feet.
30-inch	59,637	feet.
24-inch	23,942	feet.
20-inch	6.854.8	feet.
16-inch	31,574	feet.
12-inch	54,089.6	feet.
10-inch	14,758.1	feet.
8-inch	125,275.73	feet.
6-inch	595,974.09	feet.
*4-inch	3,719.3	feet.
Total	925 908.62	feet.

or, 175.3615 miles.

The work of laying the following water pipes, completing the list ordered by the City Council, had not been commenced December 31, 1883, viz.:—

No. of Resolution.	Date of Approval.	
313.	Sept. 6, 1882,	†*Reservoir avenue and Jordan street, from Fenner avenue to about 30[illegible] feet northerly from Reservoir avenue*

*At Pipe-yard, Roger Williams Park, and North Burial Ground.

†Work delayed by request of parties guaranteeing income on this line.

No. of Resolution.	Date of Approval.	
160.	May 7, 1883,	**Knightsville road, or Park avenue, from Reservoir avenue to Elmwood avenue.*
429.	Oct. 23, "	*Norwood avenue, from Manton avenue to Worsted avenue, and in Worsted avenue, westerly.*
440.	Nov. 7, "	*Abbott street, from present end of pipe, westerly, about 105 feet.*
441.	" " "	*Alverson street, Johnston, from Plainfield street, northerly, about 615 feet.*
442.	" " "	*Charles street, from present end of pipe, westerly, about 223 feet.*
443.	" " "	*Court on southerly side of Orms street, between Carroll and Jefferson streets.*
445.	" " "	*Miller street, from present end of pipe, to Gilbert street, and in Gilbert street from Miller street to Hammond street.*
459.	" 19, "	*Miner street, from present end of pipe, northerly, about 246 feet.*
470.	" 24, "	*Althea street, from Cranston street, westerly, about 442 feet.*
473.	" " "	*Pearl street, from Wellington street, southeasterly, about 67 feet.*
488.	Dec. 6, "	*Jencks court, or East Elmwood avenue, from Reservoir avenue to end of court.*
489.	" " "	*Providence street, from present end of pipe, easterly, about 72 feet.*
525.	" 20, "	*† Wild street, from Branch avenue, northerly, about 781 feet.*

* 916 feet of six-inch pipes ordered in this street have not been laid.

† A small portion only of this street laid.

Four fire hydrants have been set during the last quarter, one in each of the following locations:

Cady avenue, north side, about 293 feet west of Savings street.

Baker street, northeast corner of Plain street.

Branch avenue, south side, opposite barn of Union Railroad Co.

Burrington street, northerly side, opposite west line of Pleasant View avenue.

The total number of fire hydrants is now twelve hundred and three.

During the quarter ending December 31, 1883, one hundred and fifty-four water meters have been set, and the use of forty-four discontinued. The following water meters were in use at the close of the quarter:—

KIND.	SIZES.							Total.
	⅝ in.	¾ in.	1 in.	1½ in.	2 in.	3 in.	4 in.	
Ball & Fitts, Piston	2,860	550	128	47	7	1	.....	3,[illegible]
Ball & Fitts, Rotary	1	.....	22	27	3	7	3	6[illegible]
Crown	1,109	196	62	20	4	2	1	1,[illegible]
Fales, Jencks & Sons	289	198	18	3	9	.....	3	[illegible]
Worthington	150	.....	.....	.....	.....	.....	1	[illegible]
	4,409	944	230	97	23	10	8	5,7[illegible]

One plumber's license was issued during the quarter, making the total number issued during the year sixty.

Six hundred and twenty-six permits to do plumbing work were issued during the quarter.

One hundred and forty-one applications for water have been made, making the total number at the close of the quarter, twelve thousand one hundred and ninety-seven.

The number of new service stops opened during the last quarter was one hundred and fifty-two.

The total number of service stops opened December 31, 1883, inclusive, was eleven thousand five hundred and thirty-one. The number in actual use December 31, 1883, was ten thousand nine hundred and twenty-one.

The following table exhibits the number of service stops opened by months from the commencement to December 31, 1883:

SERVICE STOPS OPENED TO DECEMBER 31, 1883.

MONTHS.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
January	.....	54	33	21	34	55	15	49	9	20	7	17	15
February	.....	47	18	18	7	25	23	18	9	19	3	11	9
March	.....	38	34	63	7	45	32	60	19	46	23	39	11
April	.....	109	109	108	32	108	82	78	52	58	55	49	55
May	.....	224	206	147	162	168	136	95	80	84	66	72	78
June	.....	329	295	151	172	148	114	103	71	109	82	48	64
July	.....	333	261	127	141	158	83	80	49	75	56	77	66
August	.....	224	209	123	83	94	91	51	51	39	58	87	69
September	.....	184	147	139	101	94	80	63	44	37	60	67	93
October	.....	138	135	160	92	84	81	78	79	48	61	56	47
November	.....	100	104	185	86	54	73	57	63	54	37	64	49
December	56	83	45	122	60	35	55	45	47	29	40	27	56
	56	1,863	1,596	1,364	977	1,068	865	777	573	618	548	614	612

The average daily consumption of water during the last quarter, was 3,616,697 gallons.

The following is a statement of receipts for water, by months, from commencement to December 31, 1883, inclusive:

MONTHS.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
January....	.....	$40,699 00	$69,356 70	$92,102 10	$106,847 71	$124,146 05	$141,006 51	$147,888 06	$160,370 27	$170,104 89	$175,820 02	$191,367 40
February..	$796 06	4,314 80	3,678 96	4,674 19	2,939 71	5,592 98	5,166 46	3,921 14	3,475 86	3,663 06	3,909 02	3,716 15
March.....	6,671 82	6,669 73	9,221 19	4,777 42	6,777 07	9,455 64	4,318 92	4,704 11	6,060 68	5,505 89	11,112 73	1,220 34
April.....	1,668 59	2,810 07	4,936 98	10,093 32	13,384 63	7,722 51	14,965 74	15,146 37	14,095 15	13,844 44	12,683 36	22,891 51
May.....	2,063 41	1,766 28	2,338 59	2,574 92	2,598 33	3,307 32	2,787 37	1,957 18	2,172 65	2,088 74	1,987 79	2,143 14
June.....	8,634 89	8,228 92	2,583 35	8,140 99	6,506 75	8,840 60	4,207 37	3,638 09	6,597 05	11,202 59	2,049 18	7,870 41
July.....	3,488 27	6,214 24	13,756 51	9,035 23	14,055 90	9,350 82	14,758 80	14,351 48	15,613 89	12,495 48	20,208 23	15,097 13
August.....	1,818 14	1,441 09	1,953 37	4,001 66	2,324 74	3,205 95	2,872 26	5 194 44	2,591 49	2,208 76	3,309 84	2,154 16
September.	4,933 41	7,550 64	5,541 34	5,393 34	13,053 49	3,313 36	7,457 55	6,129 36	5,794 60	1,353 16	1,410 30	1,407 65
October....	5,079 08	8,745 53	9,007 95	13,578 46	8,623 85	15,865 02	15,335 95	17,794 0.	20,094 65	23,654 63	14,100 56	20,313 15
November..	477 04	872 83	1,511 03	1,291 59	908 43	1,050 65	900 39	893 68	2,085 68	2,874 33	10,367 91	7,983 51
December..	5,372 77	8,072 87	8,076 42	9,481 49	5,848 12	8,008 49	5,105 92	7,933 86	8,753 09	10,814 90	6,230 23	7,408 34
	$41,003 51	$97,386 09	$132,062 39	$165,144 71	$183,808 73	$200,039 30	$218,883 33	$229,551 78	$247,705 06	$260,530 87	$269,318 77	$283,632 80

The amount of bills approved on account of Water Works, from October 1 to December 31, 1883, inclusive, was

For construction and extension $13,512 37

Classified as follows :—

Pawtuxet Water Pipe Co	$7,000 00
Laying water pipes	1,931 24
Cast-iron water pipes	1,005 31
Taps and stops	927 95
Laying service pipes	667 75
Special castings	467 64
Barn at pipe yard	357 04
Testing second engine at Hope Station, (old account contracted in 1876)	336 10
Horse and wagon account	332 82
Stable expenses	237 95
Labor on and carting pipes	113 41
Wharf salaries	106 00
Superintendent's clerk	29 16
	$13,512 37

For maintenance $20,612 34

Classified as follows :—

PETTACONSET PUMPING STATION.

Coal and wood	$1,179 69	
Sundries	486 08	
Engineers	400 00	
Firemen	317 98	
Superintendence	166 66	
Real estate, repairs, etc	83 53	
Oil, waste, and packing	76 55	
Care of grounds	53 38	
Corliss pumping engine	38 76	
Labor on fuel	33 90	
Barn expenses	14 75	
Engine house (Cornish)	9 68	
Horse and wagon account	9 00	
New pumping works	3 12	
		$2,873 08
Amount carried forward		$2,873 08

Amount brought forward		$2,873 08

SOCKANOSSET RESERVOIR.

Care of reservoir and grounds, gate-houses, etc., including cleaning of reservoir	$1,501 57	
Watch	91 50	
		$1,593 07

HOPE PUMPING STATION.

Engineers	$533 34	
Firemen	240 00	
Oil, waste and packing	38 07	
Nagle pumping engine	25 44	
Sundries	18 34	
Corliss pumping engine	4 97	
		$860 16

HOPE RESERVOIR.

Care of reservoir and grounds, gate-houses, etc., including cleaning of reservoir	$1.026 42	
Watch	137 25	
		$1,163 67

PIPE LINE AND SERVICE STOPS.

Repairs	$1,383 11	
Superintendence, salaries and expenses	403 90	
		$1,787 01

METER DEPARTMENT.

Water meters	$1,884 58	
Setting and repairing meters	852 29	
		$2,736 87

OFFICE.

Clerks' salaries	$977 37	
Secretary's salary	383 34	
Inspectors' salaries and expenses	333 34	
		$1,694 05

MISCELLANEOUS.

Town of Cranston, tax	$4,300 00	
Purity of Pawtuxet water	2,612 90	
Superintendent's clerk	229 18	
Water rebate	226 00	
Telephone lines	218 25	
Pipe yard office expenses	103 11	
Amounts carried forward	$7,689 44	$12,707 91

Amounts brought forward	$7,689 44	$12,707 91
Public drinking fountains and troughs	58 44	
Horse hire	51 66	
Sundries	38 20	
Real estate at Pawtuxet	34 30	
Horse and wagon account	16 42	
Real estate in Lincoln	12 60	
Analyses of water	3 37	
		$7,904 43
		$20,612 34

The amount of expenditures from October 1 to December 31, 1883, inclusive, was	$34,124 71
The total expenditure to December 31, 1883, inclusive, was	5,969,144 97
The *net* expenditures for construction and extension from October 1 to December 31, 1883, inclusive, was	11,008 89
The *net* expenditures for construction and extension to December 31, 1883, inclusive, was	4.924,653 81
The *net* expenditures for maintenance from October 1 to December 31, 1883, inclusive, was	14,627 29
The *net* expenditures for maintenance to December 31, 1883, inclusive, was	589,904 29

Bills deposited with the City Treasurer for collection, from October 1 to December 31, 1883, inclusive, amounted to $55,477 97

As follows :—

For water supplies	$49,467 25
" water meters	3,540 60
" setting and repairing meters	1,471 54
" rent of real estate, etc	109 88
" permanently closing service stops	20 00
" penalties	6 00
" cast-iron water pipes	470 57
" labor and materials laying service pipes	271 57
" labor and materials laying water pipes	119 06
" labor on pipes	1 50
	$55,477 97

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to ..... $45,651 80.

As follows :—

For water supplies	$37,172 65
" water meters	4,005 60
" setting and repairing meters	1,487 12
" rent of real estate, etc	268 45
" grass at Hope Reservoir	155 00
" repairs on pipe line	37 38
" permanently closing service stops	30 00
" penalties	10 00
" cast-iron water pipes	1,412 47
" labor and materials laying service pipes	438 19
" labor and materials laying water pipes	333 44
" fire hydrants	300 00
" labor on pipes	1 50
	$45,651 80

SEWERS.

November 5th, last, proposals for constructing the following named sewers were opened, and on the 9th of the same month the contracts were awarded to Arthur F. Williams, of Boston, Mass., who subsequently signed said contracts, viz. :—

[The amounts given below are what it is estimated will be paid the contractors for labor, and does not include the cost for inspection and materials.]

No. of Resolution.	Date of Approval.		Amount.
364.	Sept. 26, 1883,	*Wickenden street, from Hope street to Ann street,*	$548 00
382.	" " "	*John street, from Thayer street to Brook street....*	769 50

During the last quarter the work of constructing the following sewers has been completed, viz. :

No. of Resolution.	Date of Approval.	
468.	Nov. 18, 1882,	*Transit street, from Governor street to East street.*

No. of Resolution.	Date of Approval.	
165.	May 7, 1883,	*Plain street, from Willard street to Blackstone street.*
166.	" " "	*Fulton street, from Union street to Eddy street.*
236.	June 8, "	*Holden street, from Beach street to Smith street.*
237.	" " "	*Manning street, from Gano street to Governor street.*
239.	" " "	*Providence street, from Pearl street to Dudley street.*
240.	" " "	*Willard and Eddy streets, from present end of sewer in Eddy street to Plain street.*
241.	" " "	*Codding street, from about 380 feet north of Cranston street to Cranston street.*
242.	" " "	*Cranston street, from Codding street to Pearl street.*
274.	July 3, "	*Hospital street, from Elm street to South street.*
364.	Sept. 26, "	*Wickenden street, from Ann street to Hope street.*
382.	" " "	*John street, from Brook street to Thayer street.*

Work upon the following sewers, completing the list ordered by the City Council, had not commenced December 31, 1883, viz. :

No. of Resolution.	Date of Approval.	
397.	Oct. 7, 1882,	*Orms street, from Carroll street to present end of sewer in Orms street.*
460.	Nov. 19, 1883,	*East street, from Transit street to Wickenden street.*

Assessments for the following sewers have been completed and certified to the City Treasurer:

Stewart street, from Conduit street to a point opposite No. 85 Stewart street	$509 13	
Transit street, from Governor street to East street	655 97	
Lester street, from A street to present sewer at Saunders street	846 95	
Pettis street, and Nash lane from Palmer street to Nichols street	1,373 18	
Shove street, from Pettis street to Hedley street	825 92	
Pettis, Polk and Hedley streets, from the summit in Pettis street to Shove street	1,348 22	
Wilson and Greenwich streets	1,441 39	
Fulton street, from Union street to Eddy street	306 77	
Hospital street, from Elm street to South street	294 49	
		$7,602 02

One hundred and twenty-three permits have been issued to drain-layers. Seventy-one for new work, and fifty-two for extensions of drains.

The amount of bills approved on account of sewers, from October 1 to December 31, 1883, inclusive, was:

For construction $20,849 94

Expended as follows:—

For materials	$7,406 77
" clerks' salaries	103 29
" testing cement	33 95
" additional catch basins	14 50
" sewer in Willard and Eddy streets	2,301 91
" sewer in Holden street, from Smith street to Beach street	1,961 00
" sewer in Manning street, from Governor street to Gano street	1,900 32
" sewer in Cranston street, from Codding street to Pearl street	1,781 43
" sewer in Providence street, from Dudley street to Pearl street	1,395 27
Amount carried forward	$16,849 44

Amount brought forward	$16 849 44
For sewer in John street, from Thayer street to Brook street	759 11
" sewer in Wickenden street, from Hope street to Ann street	553 82
" sewer in Codding street, from Cranston street, northerly	547 62
" sewer in Transit street, from East street to Governor street	531 71
" sewer in Plain street, from Willard street to Blackstone street	527 69
" sewer in Hospital street, from South street to Elm street	321 80
" sewer in Fulton street, from Union street to Eddy street	279 81
" sewer in Clinton street, from Broad street to Prairie avenue	137 74
" sewer in South Main and Hopkins streets	40 70
" sewer in Polk and Hedley streets	22 40
" sewer in Greenwich and Wilson streets	14 95
" sewer in Pettis street and Nash lane	10 00
" sewer in Shove street, from Hedley street to Nash lane	8 20
" sewer in Lester street, from A street to Saunders street	4 95
" sewer in Hayward street, from Lockwood street to Pearl street	3 60
" Broad street, corner of Public street, relieve from overflow of surface water	187 40
	$20,849 94

For maintenance $5,531 65

Charged as follows:—

Cleaning basins and sewers	$3,192 98
Repairing basins and sewers	330 32
Cleaning and repairing old drains	238 75
Tools	721 69
Horses, wagons, carts, harnesses, etc	364 57
Stable expenses	267 40
Salaries, superintendent and clerks	245 82
Inspection of connections	166 66
Sundries	3 46
	$5,531 65

The *net* expenditure for construction of sewers to December 31, 1883, inclusive, was $1,629,421 23

The *net* expenditure for maintenance of sewers to December 31, 1883, inclusive, was 158,061 16

Bills deposited with the City Treasurer for collection, from October 1 to December 31, 1883, inclusive, amounted to $241 62

As follows :—

For cleaning private drains, etc	$111 68
" furnishing and laying drain pipe, etc	28 20
" filling cisterns, etc	7 25
" tools	3 00
" private drains laid in streets	59 98
" labor, etc., on sewers	29 71
" cracked sewer pipe	1 80
	$241 62

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to $286 98

As follows :—

For cleaning private drains, etc	$111 50
" filling cisterns	25 25
" labor, supplying water to Dexter Asylum	12 63
" tools	3 00
" private drains laid in street	69 08
" labor, etc., on sewers	35 22
" sewer material	30 30
	$286 98

(881.) CITY DOCUMENT. [No. 18.

FIFTH QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

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QUARTER ENDING MARCH 31, 1884.

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1884.

FIFTH QUARTERLY REPORT

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TILDEN FOUNDATIONS.
1910.

REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., April 1, 1884.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 207 of the ordinances, approved February 14, 1883, the Board of Public Works respectfully presents its fifth quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, condition and cost of same for the quarter ending March 31, 1884.

HIGHWAYS.

January 23d, 1884, proposals for furnishing curbing, cross-walk stone and granite blocks were opened under advertisement dated January 7th, 1884, and on the 24th of said month the proposal of Booth Brothers of New London, Conn., to furnish ten thousand square yards of granite blocks delivered on cars in this city was accepted. A contract was subsequently executed which will amount to $16,-200.00. On the same day the offer of the Rhode Island Granite Works to furnish:

15,000 lineal feet straight curbing;
1,700 lineal feet straight curbing, extra depth:
From 500 to 1,000 lineal feet of circular curbing, 8 foot radius;
From 500 to 1,000 lineal feet of circular curbing, 10 foot radius;
200 curbstone corners, 2 foot radius;

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ASTOR, LENOX AND
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1900.

REPORT.

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15,000 lineal feet straight curbing;
1,700 lineal feet straight curbing, extra depth:
From 500 to 1,000 lineal feet of circular curbing, 8 foot radius;
From 500 to 1,000 lineal feet of circular curbing, 10 foot radius;
200 curbstone corners, 2 foot radius;

10 curbstone corners, 3 foot radius;
2,500 lineal feet 24 inch cross-walk stone;
From 3,000 to 5,000 lineal feet of 18 inch cross-walk stone; and
From 3,000 to 5,000 lineal feet of 14 inch cross-walk stone was accepted.

A contract was subsequently executed with the New England Granite Works, proprietors of the above quarries, and will amount to $15,095.00.

A contract dated February 9, 1884, has been executed with the Rhode Island Concrete Co., to lay the concrete required for the season of 1884.

During the quarter ending March 31, 1884, the following work was completed, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of Order.

Dec. 21, 1882, *Wayland street, from Waterman street to Pitman street.*

Wall to be Rebuilt.

Nov. 15, 1883, *In front of estate of William Gallagher, on Branch avenue.*

The following work was, March 31, 1884, in a state of progress as follows, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of Order.

Oct. 19, 1882, *Clinton street, from Broad street to Prairie avenue:*—a portion of the stock for building the street has been carted to an adjoining lot.

Date of Order.

Nov. 16, 1882, *Mawney street, from Greenwich street to Updike street:*—a portion of the stock for building the street has been carted to an adjoining lot.

Aug. 16, 1883, *Vinton street, from Broadway to Carpenter street:*—the portion between Broadway and Carpenter street has been built.

Oct. 18, " *Branch avenue, from a point three hundred feet south of Smithfield avenue to a point one hundred and fifty feet west of Opper street:*—finished except graveling, and paving a portion of the roadway at West River street.

Nov. 15, " *Branch avenue on the north side thereof, from Slocum street, so called, to the bridge over the West river, and on the south side of said Branch avenue, from said Slocum street to Vanderwater street:*—the greater portion of the street has been curbed and the gutters paved.

Concrete Sidewalks and Curb same.

Date of Order.

Oct. 4, 1883, *North Main and Mill streets, at Fire Station:*—finished except concreting sidewalk on North Main street.

To be Repaired.

Aug. 3, 1882, *Diman place:*—the obstructions have been removed, and a greater portion of the street brought to grade.

To be Graded.

No. of Resolution.	Date of Approval.	
208.	May 21, 1883,	*Branch avenue, from North Main street to Douglas avenue:*—practically brought to curb grade from North Main street to Veazie street.

Obstructions to be Removed.

Date of Order.	
Oct. 4, 1883,	*Branch avenue, from Smithfield avenue to Douglas avenue:*—a portion of the obstructions have been removed.

The following work ordered by the Board of Aldermen and City Council had not been commenced March 31, 1884, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of Order.		
July 6,	1882,	*Holden street, from Beach street to Smith street.*
Aug. 3,	"	*Capron street, in front of Julian street school-house estate.*
Oct. 19,	"	*Polk street, from Pettis street to Hedley street.*
" "	"	*Potter's avenue, from Broad street to Greenwich street.*
" "	"	*Providence street, from Dudley street to Pearl street.*
Nov. 16,	"	*Transit street, from Governor street to Ives street.*
" "	"	*Willard street, from Plain street to Eddy street.*

Date of Order.		
Nov. 16,	1882,	*Eddy street, from Thurber's avenue to Pavilion avenue.*
Dec. 21,	"	*Somerset street, from Friendship street to West Clifford street.*
" "	"	*Clinton street, from Prairie avenue to Gay street.*
Jan. 18,	1883,	*Manning street, from Governor street to Gano street.*
April 19,	"	*Adelaide avenue, from Broad street to Niagara street.*
" "	"	*Somerset street, from West Clifford street to Providence street.*
May 7,	"	*Reservoir avenue, east side, from Greenwich street to the railroad bridge.*
May 17,	"	*Lester street, south side, from Gilmore street to Harrison street.*
" "	"	*Constitution street, from Lester street to Wilson street.*
July 19,	"	*Chalkstone avenue, from Charles street to Black street.*
" "	"	*Cypress street, from North Main street to Camp street.*
Sept. 20,	"	*D street, from Lester street to Booth street.*
" "	"	*Elmwood avenue, west side, from Atlantic street to Adelaide avenue.*
" "	"	*Greenwich street and Elmwood avenue, east side, from Potter's avenue to Adelaide avenue.*
" "	"	*Moore street, from Broad street to Updike street.*
" "	"	*Pike street, from South Main street to Benefit street.*
" "	"	*Taber avenue, from Angell street to a point 100 feet north of Humboldt avenue.*

Date of Order.		
Oct. 18,	1883,	*Arnold street, from East street to Governor street.*
" "	"	*Manning street, from Hope street to Thayer street.*
" "	"	*Warren street, from Fuller street to Dexter street.*
Nov. 15,	"	*Cromwell street, from Greenwich street to Dexter street.*
" "	"	*Pearl street, from Beacon street to Plain street.*
" "	"	*Wellington street, from East Beacon street to Pearl street.*
Dec. 31,	"	*Dexter street, from Cranston street to Cromwell street.*
Feb. 21,	1884,	*Pearl street, on the north side, from the east curb line of Cranston street to the west curb of Broad street, and on the south side, from the east curb of Cranston street to the west curb of Central street.*
March 24,	"	*High, Fenner and Pond streets, adjoining the estate of SS. Peter and Paul corporation.*

Concrete Sidewalks.

No. of Resolution.	Date of Approval.	
	Aug. 3, 1882,	*Julian and Capron streets, adjoining Julian street school-house estate.*
437.	Nov. 7, 1883,	*Messer street, from High street to Cranston street.*
480.	" 24, "	*Olive street, north side, from Prospect street to Thayer street.*
49.	Feb. 5, 1884,	*Dover street, north side, from a point 100 feet west of Carleton street to Academy avenue.*

Abate Nuisance on.

No. of Resolution.	Date of Approval.	
218.	May 20, 1882,	*Mitchell street, caused by overflow of surface water.*

Pave with Granite Blocks.

363.	Sept. 26, 1883,	*Eddy street, from Westminster street to Fulton street.*

To be Repaired.

	Nov. 15, 1883,	*Gangway on the northerly side of Fire Station, between Mill and North Main streets, and also the steps known as "Thurber's steps."*

To be brought to Grade.

	Nov. 15, 1883,	*Highway, at corner of Dyer and Pine street.*
	Dec. 27, "	*Highway, adjacent to estate of Wanton Durfee and Humphrey Almy, on Dyer and Custom House streets.*

Five permits to open streets were granted during the quarter.

The amount of bills approved on account of Highways, from January 1, to March 31, 1884, inclusive, was $37,-570.70.

Classified as follows:—

Cleaning streets	$1,499 48	
Repairs on unpaved streets	3,410 90	
Repairs on paved streets	113 36	
Labor and materials, crushed stone	7,790 25	
Paving and crosswalk stone	6,606 83	
Cleaning streets from ice and snow	4,176 48	
Barn expenses	2,590 50	
Tools, implements, etc	1,578 34	
Salaries, superintendent, clerks and inspectors	1,441 38	
Blacksmith and wheelwright shop	1,431 99	
Labor on materials	1,281,70	
Horses, wagons, carts, harnesses, etc	766 48	
Repairs on stone crushers	589 90	
Labor and materials, harness shop	442 18	
Steam rollers, repairs and supplies	306 35	
Watering streets	180 00	
Watchman at city yard	164 16	
Sundries	36 53	
Office expenses, city yard	32 07	
Telephone lines	3 68	
Labor and materials, fencing streets	3 15	
		$34,445 71

NEW WORK BUILDING AND RE-BUILDING STREETS, INCLUDING THAT ORDERED BY THE CITY COUNCIL.

SIDEWALKS CURBED AND GUTTERS PAVED.

Audrey street, from Bowdoin street to Delaine street,	$1 45	
Branch avenue, from Slocum street to Vandewater street	754 10	
Branch avenue, from near Smithfield avenue to near Opper street	268 76	
Clinton street, from Broad street to Prairie avenue.	366 16	
Delaine street, from the bridge to Appleton street..	26 85	
Greenwich street, west side, from Earl street to Reservoir avenue	8 55	
Holden street, from Beach street to Smith street...	143 52	
Manning street, from Governor street to Gano street	26 44	
Mawney street, from Greenwich street to Updike street	131 42	
Amounts carried forward	$1,727 25	$34,445 71

Amounts brought forward	$1,727 25	$34,445 71
Reservoir avenue, west side from Greenwich street to railroad bridge	12 60	
Vinton street, from Broadway to Carpenter street.	61 96	
Wayland street, from Waterman street to Pitman street	39 12	
WORKED TO GRADE.		
Branch avenue, from North Main street to Douglas avenue	159 31	
Elmwood avenue, from the railroad bridge to the city line	126 15	
REBUILD WALL.		
Branch avenue, in front of the estate of William Gallagher	459 60	
REMOVE OBSTRUCTIONS.		
Vinton street, from Broadway to Carpenter street..	23 37	
MACADAMIZED.		
Atwell's avenue	515 63	
		$3,124 99
		$37,570 70

Bills deposited with the City Treasurer for collection, from January 1, to March 31, 1884, inclusive, amounted to $485.26.

As follows :—

For labor and materials on streets	$254 51
For street sweepings	88 46
For manure from barn	73 13
For crosswalk stone	44 80
For chopping blocks	18 50
For tools, etc	5 86
	$485 26

During the quarter coupons for bills collected have been returned by the City Treasurer, and receipted for, amounting to $451.78.

As follows :—

For street sweepings	$226 76
For labor and materials on streets	87 10
For stone, paving and crosswalk	61 71
For building stone	42 50
For labor on materials	17 46
For chopping blocks	11 25
For tools	5 00
	$451 78

The amount of expenditures on account of sidewalks and curbing from January 1, to March 31, 1884, inclusive, was $2,041.15.

Bills deposited with the City Treasurer for collection, on account of sidewalks and curbing, from January 1, to March 31, 1884, inclusive, amounted to $481.44.

During the quarter coupons from sidewalks and curbing bills collected have been returned by the City Treasurer, and receipted for, amounting to $161.95.

WATER WORKS.

January 10, 1884, the offer of the Fales & Jenks Machine Co. to furnish, delivered in this city, ten fire hydrants and ten fire hydrant boxes, was accepted. Amount, $1,400.00.

January 11, the offer of the Boston Machine Manufacturing Co. to furnish, delivered in this city, eight 12-inch, fifteen 8-inch, sixty 6-inch, fifteen 4-inch, and fifteen 2½-inch water gates was accepted. Amount, $2,567.00.

January 15, the offer of John W. Lyon to furnish five hundred $\frac{1}{2}$-inch taps, five hundred $\frac{1}{2}$-inch stops, twenty-five $\frac{5}{8}$-inch taps, twenty-five $\frac{5}{8}$-inch stops, twenty-five $\frac{3}{4}$-inch taps, fifteen $\frac{3}{4}$-inch stops, thirty-five 1-inch stops, fifteen $\frac{1}{2}$-inch plugs, and fifteen $\frac{5}{8}$-inch plugs, was accepted. Amount, $1,050.00.

January 19, the offer of Fuller Iron Works to furnish special castings and service boxes, was accepted.

January 21, the offer of Thomas Phillips & Co. to furnish nineteen tons of Anchor brand of pig lead, was accepted. Subsequently Messrs. Phillips & Co. having declined to furnish the lead, the offer of Rowland Hazard to furnish it at the same price as that offered by Messrs. Phillips & Co. was accepted. Amount, $1,660.00.

January 21, the offer of L. H. Tillinghast & Co. to furnish four hundred pounds of "Strait's" tin, was accepted. Amount, $76.00.

January 21, the offer of E. P. White & Co., of New York, to furnish, delivered in this city, sixteen tons AAA. lead pipe, standard weight, of various sizes, was accepted. Amount, $1,840.00. Subsequently Messrs. White & Co. transferred the contract to Messrs. L. H. Tillinghast & Co.

January 30, the offer of the Providence Steam and Gas Pipe Co., to furnish two thousand service box plugs for the sum of six hundred and fifty dollars, was accepted.

February 14, proposals for furnishing cast iron water pipes were opened under advertisement dated January 24, 1884, and the proposal of the Warren Foundry and Machine Co. to furnish, delivered in this city:

10 tons 4-inch cast iron water pipes, class A;
550 tons 6-inch cast iron water pipes, class B;
146 tons 8-inch cast iron water pipes, class B;
54 tons 8-inch cast iron water pipes, class A;
40 tons 12-inch cast iron water pipes, class A;
45 tons 12-inch cast iron water pipes, class B,

was accepted. A contract has since been executed with said company which will amount to $27,771.00.

February 20, the offer of Hopkins, Pomroy & Co., to do the teaming for the season of 1884, was accepted.

During the quarter ending March 31, 1884, water pipes were laid as follows, viz.:

No. of Resolution.	Date of Approval.	
442.	Nov. 7, 1883,	*Charles street, from present end of pipe, westerly, about 223 feet:*—230.9 feet of eight-inch pipes.
459.	" 19, "	*Miner street, from present end of pipe, northerly, about 246 feet:*—395.2 feet of six-inch pipes.
473.	" 24, "	*Pearl street, from Wellington street, southeasterly, about 67 feet:*—63.6 feet of six-inch pipes.
488.	Dec. 6, "	*Jencks court, or East Elmwood avenue, from Reservoir avenue to end of court:*—242.1 feet of six-inch pipes.
489.	" " "	*Providence street, from present end of pipe, easterly, about 72 feet:*—159.5 feet of six-inch pipes.
525.	" 20, "	*Wild street, from Branch avenue, northerly, about 781 feet:*—420.9 feet of six-inch pipes.

Length of 6-inch pipes laid during the quarter..... 1,281.3 feet.
Length of 8-inch pipes laid during the quarter..... 230.9 feet.

Total..... 1,512.2 feet.

Statement of sizes and lengths of pipes laid since the commencement of the work :—

36-inch	10,084	feet.
30-inch	59,637	feet.
24-inch	23,942	feet.
20-inch	6,854.8	feet.
16-inch	31,574	feet.
12-inch	54,089.6	feet.
10-inch	14,758.1	feet.
8-inch	134,067.45	feet.
6-inch	599,354.17	feet.
Total	934,361.12	feet

or, 176.9623 miles.

The work of laying the following water pipes, completing the list ordered by the City Council, had not been commenced March 31, 1884, viz. :—

No. of Resolution.	Date of Approval	
313.	Sept. 6, 1882,	†*Reservoir avenue and Jordan street, from Fenner avenue to about 304 feet northerly from Reservoir avenue.*
160.	May 7, 1883,	**Knightsville road, or Park avenue, from Reservoir avenue to Elmwood avenue.*
429.	Oct. 23, "	*Norwood avenue, from Manton avenue to Worsted avenue, and in Worsted avenue, westerly.*
440.	Nov. 7, "	*Abbott street, from present end of pipe, westerly, about 105 feet.*
441.	" " "	*Alverson street, Johnston, from Plainfield street, northerly, about 615 feet.*

†Work delayed by request of parties guaranteeing income on this line.
*916 feet of six-inch pipes ordered in this street have not been laid.

No. of Resolution.	Date of Approval.	
443.	Nov. 7, 1883,	*Court on southerly side of Orms street, between Carroll and Jefferson streets.*
445.	" " "	*Miller street, from present end of pipe, to Gilbert street, and in Gilbert street from Miller street to Hammond street.*
470.	" 24, "	*Althea street, from Cranston street, westerly, about 442 feet.*
110.	Mar. 10, 1884,	*Dahlia street, from present end of pipe, easterly, about 593 feet.*
111.	" " "	*Tell street, from end of pipe between Almy street and Courtland street, westerly, about 60 feet.*

The total number of fire hydrants is twelve hundred and nine; twelve hundred and three flush and six post hydrants.

During the quarter ending March 31, 1884, one hundred and seventy-eight water meters were set, of which fifty-eight were to replace condemned meters, and the use of five meters was discontinued. The following water meters were in use at the close of the quarter :—

KIND.	SIZES.							Total.
	⅝ in.	¾ in.	1 in.	1½ in.	2 in.	3 in.	4 in.	
Ball & Fitts, Piston	2,862	550	128	47	7	1	.....	[illegible]
Ball & Fitts, Rotary	1	.....	22	27	3	7	3	[illegible]
Crown	1,254	212	68	22	7	2	1	[illegible]
Fales, Jenks & Sons	254	184	17	2	5	.....	3	[illegible]
Worthington	146	.....	.....	.....	.....	.....	1	[illegible]
	4,517	946	235	98	22	10	8	[illegible]

Fifty-two plumbers' licenses were issued during the quarter, all of which expire December 31, 1884.

Four hundred and eighty-five permits to do plumbing work were issued during the quarter.

Forty-eight applications for water have been made, making the total number at the close of the quarter twelve thousand two hundred and forty-five.

The number of new service stops opened during the last quarter, was fifty-nine.

The total number of service stops opened March 31, 1884, inclusive, was eleven thousand five hundred and ninety. The number in actual use March 31, 1884, was ten thousand nine hundred and forty-nine.

The average daily consumption of water during the last quarter, was 4,007,551 gallons.

The amount of bills approved on account of Water Works, from January 1, to March 31, 1884, inclusive, was

For construction and extension, . . $15,532.91

Classified as follows :—

Cast iron water pipes	$9,992 02
Laying water pipes	1,861 70
Stop valves	1,246 67
Rent of wharf and pipe yard	625 00
Service pipe	631 19
Laying service pipes	371 46
Barn expenses	249 49
Special castings	220 69
Tools	148 74
Wharf salaries	75 00
Labor on and carting pipes	46 86
Horse and wagon account	40 22
Superintendent's clerk	21 87
Taps and stops	2 00
	$15,532 91

For maintenance, ... $15,251.92

Classified as follows :—

PETTACONSET PUMPING STATION.

Coal and wood	$1,136 57	
Sundries	830 21	
Engineers	600 00	
Firemen	417 77	
New pumping works	270 85	
Superintendence	249 99	
Lights	219 10	
Labor on fuel	143 93	
Oil, waste and packing	121 14	
Barn expenses	31 43	
Real estate, repairs, etc	17 85	
Engine house, (Cornish)	14 00	
Worthington pumping engine	10 48	
Care of grounds	6 25	
Horse and wagon account	2 00	
		$4,071 57

SOCKANOSSET RESERVOIR.

Watch	$186 50	
Care of reservoir and grounds, gate-houses, etc.	100 39	
		$236 89

HOPE PUMPING STATION.

Engineers	$800 01	
Firemen	360 00	
Lights	149 10	
Sundries	24 53	
Corliss pumping engine	4 50	
Oil, waste and packing	3 74	
		$1,341 [illegible]

HOPE RESERVOIR.

Watch	$204 75	
Care of reservoir and grounds, gate-houses, etc.	77 66	
		$282 41

Amount carried forward $5,932 73

Amount brought forward		$5,932 75

PIPE LINE AND SERVICE STOPS.

Repairs	$1,332 48	
Superintendence, salaries and expenses	617 15	
		$1,949 63

METER DEPARTMENT.

Water meters	$2,787 79	
Setting and repairing meters	1,110 30	
		$3,898 09

OFFICE.

Clerks' salaries	$1,479 73	
Secretary's salary	575 01	
Inspectors' salaries and expenses	500 01	
		$2,554 75

MISCELLANEOUS.

Superintendent's clerks	$348 62	
Analyses of water	139 50	
Telephone lines	112 73	
Purity of Pawtuxet water	102 40	
Horse and wagon account	70 52	
Horse hire	62 49	
Barn expenses	37 57	
Pipe yard, office expenses	31 14	
Sundries	8 25	
Public drinking fountains and troughs	3 48	
		$916 70
		$15,251 92

The amount of expenditures from January 1, to March 31, 1884, inclusive, was	$30,784 83
The total expenditure to March 31, 1884, inclusive, was	5,999,929 80
The *net* expenditures for construction and extension from January 1, to March 31, 1884, inclusive, was	14,873 07
The *net* expenditures for construction and extension to March 31, 1884, inclusive, was	4,939,526 88
The *net* expenditures for maintenance from January 1, to March 31, 1884, inclusive, was	12,089 94
The *net* expenditures for maintenance to March 31, 1884, inclusive, was	601,994 23

Bills deposited with the City Treasurer for collection, from January 1, to March 31, 1884, inclusive, amounted to . . . $225,596.02

As follows:—

For water supplies	$220,652 32
" water meters	2,731 60
" setting and repairing meters	831 41
" rent of real estate, etc	240 52
" permanently closing service stops	25 00
" penalties	20 00
" cast iron water pipe	991 21
" labor and materials laying service pipes	77 96
" stop valves	26 00
	$225,596 02

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to . $209,478.06

As follows:—

For water supplies	$205,626 66
" water meters	2,332 30
" setting and repairing meters	688 00
" rent of real estate, etc	116 68
" permanently closing service stops	25 00
" penalties	16 00
" cast iron water pipe	426 77
" stop valves	94 00
" labor and materials laying service pipes	76 01
" special castings	57 96
" labor and materials, laying water pipes	18 68
	$209,478 06

SEWERS.

Work upon the following sewers, completing the list ordered by the City Council, had not commenced March 31, 1884, viz.:

No. of Resolution.	Date of Approval.	
397.	Oct. 7, 1882,	*Orms street, from Carroll street to present end of sewer in Orms street.*
460.	Nov. 19, 1883,	*East street, from Transit street to Wickenden street.*
490.	Dec. 6, "	*Nash lane, from Nichols street to Nash lane bridge.*
91.	Mar. 10, 1884,	*Waterman street, from summit west of Brown street to Thayer street.*

Twelve drain layers' licenses were issued during the quarter, all of which expire December 31, 1884.

Forty-three permits have been issued to drain-layers; twenty-two for new work and twenty-one for extension of drains.

The amount of bills approved on account of sewers, from January 1, to March 31, 1884, inclusive, was

For construction, ... $571.33

Charged as follows :—

For materials	$167 81
" clerks' salaries	162 96
" testing cement	98 38
" tools	12 80
" sewer in South Main and Hopkins streets	59 38
" sewer in Plain street, from Willard street to Blackstone street	30 00
" sewer in Clinton street, from Broad street to Prairie avenue	20 00
" sewer in Codding street, from Cranston street, northerly	20 00
	$571 83

For maintenance, ... $3,908.05

Charged as follows :—

Cleaning basins and sewers	$2,127 42
Repairing basins and sewers	136 33
Cleaning and repairing old drains	79 34
Barn expenses	634 68
Salaries, superintendent and clerks	486 68
Inspection of connections	249 99
Tools	120 51
Horses, wagons, carts, harnesses, etc	62 85
Sundries	10 25
	$3,908 05

The *net* expenditure for construction of sewers to March 31, 1884, inclusive, was	$1,629,698 89
The *net* expenditure for maintenance of sewers to March 31, 1884, inclusive, was	161,972 83

Bills deposited with the City Treasurer for collection, from January 1, to March 31, 1884, inclusive, amounted to $186.40.

As follows :—

For cleaning private drains, etc	$129 80
" pumping out cellars, etc	21 60
" chamber set from barn	20 00
" private drains laid in streets	15 00
	$186 40

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to $189.47.

As follows :—

For cleaning private drains, etc	$136 05
" chamber set from barn	20 00
" sewer material	15 42
" furnishing and laying drain pipe, etc	18 00
	$189 47

The City Engineer being absent in Europe by direction of the City Council, and the vacancy occasioned by the resignation of Mr. Frederic E. Anthony as a member of the board not having been filled, this report is signed by one member only.

CLINTON D. SELLEW,

Member Board of Public Works.

F 72310

]. CITY DOCUMENT. [No. 24.

SIXTH QUARTERLY REPORT

OF THE

OARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING JUNE 30, 1884.

PROVIDENCE:
PROVIDENCE PRESS CO., PRINTERS TO THE CITY.
1884.

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REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., July 1, 1884.

TO THE HONORABLE CITY COUNCIL:

In compliance with the requirements of Chapter 207 of the ordinances, approved February 14, 1883, the Board of Public Works respectfully presents its sixth quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, and the condition and cost of same for the quarter ending June 30, 1884.

Charles E. Carpenter, elected by the city council to fill the vacancy caused by the resignation of Mr. Frederic E. Anthony, after taking the oath of office, entered upon his duties on the 21st of May.

HIGHWAYS.

June 14, 1884, an offer of Joseph H. West, of Franklin, Maine, to furnish a cargo of about two thousand feet of eighteen-inch curbing, delivered on wharf in this city, was accepted. Estimated amount, $1,000.00.

Statements have been prepared of the cost of curbing set, ascertained by the board, and certified to the board of aldermen for approval, as follows, viz.:

Branch avenue, from a point 300 feet south of Smithfield avenue, to a point 150 feet west of Opper street.....	$5,648 43
Branch avenue, from North Main street, northerly 1,466 feet..	1,795 34
Bath street, from Chalkstone avenue to Orms street.....	909 65
Wayland street, from Waterman street to Pitman street.....	847 59
Chestnut street, east side, from Elm street to a point 111 feet north of Elbow street, and west side, from Bassett street 40 feet southerly.....	278 81
North Main street, from junction with Mill street to north curb of Olney street.....	1,193 69
Olney street, on the north side, from the east curb of North Main street to a point 58 feet west of Prospect street, and south side, from 199 feet east of Prospect street to west curb line of Brown street.....	470 36
Delaine street, on the south side, from the bridge near Audrey street, about 275 feet westerly, and on the north side, from the said bridge to Appleton street.....	272 50
Mawney street, from Bucklin street to Greenwich street.....	662 65
Benefit street, east side, from Burr's lane to a point 182 feet southerly, and west side, from range of south curb of North Main street to a point 203 feet southerly.....	171 14
Corner Waterman and Brown streets in front of estate of Henry T. Beckwith	74 62
Hospital street, from Borden street to Lockwood street.....	121 02
Beach street, south side, from Park street to the westerly line of Brown & Sharpe Manufacturing Company.....	123 94
Greenwich street, on the west side, from Earl street to Reservoir avenue.....	144 15
Reservoir avenue, on the west side, from Greenwich street to Railroad bridge.....	422 17
Vinton street, from Broadway to Carpenter street.....	148 74
Audrey street, from Bowdoin street to Delaine street.....	643 72
Waterman street, on the north side, from a point about 100 feet west of Prospect street to a point about 202 feet westerly.....	105 06
Moore street, from Greenwich street to Updike street.....	1,040 25
Total.....	$15,073 83

During the last quarter the following streets have been repaired :—

Broad street, from Greenwich street to Public street.
Eddy street, from Public street to Thurber's avenue.
Gaspee street, from Promenade street to Smith street.

Greenwich street, whole length including junction with Elmwood and Reservoir avenues.
Hewes street, from Stevens street to North Main street.
India street, from Ives street to India bridge.
Lester street, from Gilmore street to Pearl street.
Stevens street, from Charles street to Hewes street, and
Tockwotton street, from Gano street to Benefit street.

During the quarter ending June 30, 1884, the following work was completed, viz. :—

Sidewalks Curbed and Gutters Paved.

Date of order.	
July 6, 1882,	*Holden street, from Beach street to Smith street.*
Oct. 19, "	*Clinton street, from Broad street to Prairie avenue.*
" " "	*Polk street, from Pettis street to Hedley street.*
" " "	*Providence street, from Dudley street to Pearl street.*
Nov. 16, "	*Mawney street, from Greenwich street to Updike street.*
" " "	*Transit street, from Governor street to Ives street.*
" " "	*Willard street, from Plain street to Eddy street.*
Dec. 21, "	*Somerset street, from Friendship street to West Clifford street.*
April 19, 1883,	*Somerset street, from West Clifford street to Providence street.*
Oct. 18, "	*Branch avenue, from a point three hundred feet south of Smithfield avenue to a point one hundred and fifty feet west of Opper street.*

Nov. 15, 1883, *Branch avenue, on the north side thereof, from Slocum street, so called, to the bridge over the West river, and on the south side of said Branch avenue, from said Slocum street to Vanderwater street.*

Feb. 21, 1884, *Pearl street, on the north side, from the east curb line of Cranston street to the west curb of Broad street, and on the south side, from the east curb of Cranston street to the west curb of Central street.*

April 17, " *Dean street, on the east side, from Fountain street to High street, and on the west side from Washington street to High street.*

Concrete Sidewalks and Curb Same.

Date of Order.

Oct. 4, 1883, *North Main and Mill streets, at Fire Station.*

Concrete Sidewalks.

No. of Resolution.	Date of Approval.	
437.	Nov. 7, 1883,	*Messer street, from High street to Cranston street.*
480.	" 24, "	*Olive street, north side, from Prospect street to Thayer street.*
49.	Feb. 5, 1884,	*Dover street, north side, from a point 100 feet west of Carleton street to Academy avenue.*
195,	May 7, "	*Adjoining the High school and Summer street Intermediate and Primary school estates.*
196.	" " "	*North Main street, in front of new ward room.*
213.	" 21, "	*Winter street, in front of ward room.*

To be Graded.

No. of Resolution.	Date of Approval.	
208.	May 21, 1883,	*Branch avenue, from North Main street to Douglas avenue.*

The following work was, June 30, 1884, in a state of progress as follows, viz. :—

Sidewalks to be Curbed and Gutters Paved.

Date of Order.	
Aug. 16, 1883,	*Vinton street, from Broadway to Carpenter street:*—the portion between Broadway and Brighton street has been built.
Jan. 18, 1883,	*Manning street, from Governor street to Gano street:*—Finished except cross-walks, grading sidewalks and building roadway at intersection of Ives street.

To be Brought to Grade.

Nov. 15, 1883,	*Highway, at corner of Dyer and Pine streets:*—Finished except concreting sidewalks and repaving portion of roadway.
Dec. 27, "	*Highway, adjacent to estate of Wanton Durfee and Humphrey Almy, on Dyer and Custom House streets:*—As to the former, practically completed, except concreting sidewalks; and as to the latter, delayed to avoid legal and other difficulties.

To be Repaired.

Aug. 3, 1882, *Diman place:*—Finished, except removal of a few boulders.

Obstructions to be Removed.

Date of Order.

Oct. 4, 1883, *Branch avenue, from Smithfield avenue to Douglas avenue:*—Obstructions in the way of grading the avenue have been removed so as to make it passable. The line of occupation in places encroaches upon the line of the avenue as laid out.

The following work ordered by the Board of Aldermen and City Council had not been commenced June 30, 1884, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of Order.

Aug. 3, 1882, *Capron street, in front of Julian street school-house estate.*

Oct. 19, " *Potter's avenue, from Broad street to Greenwich street.*

Nov. 16, " *Eddy street, from Thurber's avenue to Pavilion avenue.*

Dec. 21, " *Clinton street, from Prairie avenue to Gay street.*

April 19, 1883, *Adelaide avenue, from Broad street to Niagara street.*

May 7, " *Reservoir avenue, east side, from Greenwich street to the railroad bridge.*

May 17, " *Lester street, south side, from Gilmore street to Harrison street.*

Date of Order.		
May 17,	1883,	*Constitution street, from Lester street to Wilson street.*
July 19,	"	*Chalkstone avenue, from Charles street to Black street.*
" "	"	*Cypress street, from North Main street to Camp street.*
Sept. 20,	"	*Taber avenue, from Angell street to a point 100 feet north of Humboldt avenue.*
" "	"	*Pike street, from South Main street to Benefit street.*
" "	"	*Moore street, from Broad street to Updike street.*
" "	"	*D street, from Lester street to Booth street.*
" "	"	*Elmwood avenue, west side, from Atlantic street to Adelaide avenue.*
" "	"	*Greenwich street and Elmwood avenue, east side, from Potter's avenue to Adelaide avenue.*
Oct. 18,	"	*Arnold street, from East street to Governor street.*
" "	"	*Manning street, from Hope street to Thayer street.*
" "	"	*Warren street, from Fuller street to Dexter street.*
Nov. 15,	"	*Cromwell street, from Greenwich street to Dexter street.*
" "	"	*Pearl street, from Beacon street to Plain street.*
" "	"	*Wellington street, from East Beacon street to Pearl street.*
Dec. 31,	"	*Dexter street, from Cranston street to Cromwell street.*
March 24,	1884,	*High, Fenner and Pond streets, adjoining the estate of SS. Peter and Paul Corporation.*

Date of Order.		
May 15, 1884,	*Fremont street, from Governor street to Ives street.*
June 26, "	*Diman place, from Angell street to Asylum wall.*
" " "	*Richmond street, from Ship street to Point street.*
" " "	*Stimson avenue, from Hope street to Angell street.*

Concrete Sidewalks.

Date of Order.	
Aug. 3, 1882,	*Julian and Capron streets, adjoining Julian street school-house estate.*

Abate Nuisance on.

No. of Resolution.	Date of Approval.	
218.	May 20, 1882,	*Mitchell street, caused by overflow of surface water.*

Pave with Granite Blocks.

363.	Sept. 26, 1883,	*Eddy street, from Westminster street to Fulton street.*

To be Repaired.

Nov. 15, 1883, and May 5, 1884,	*Gangway on the northerly side of Fire Station, between Mill and North Main streets, and also the steps known as "Thurber's steps."*

To be brought to Grade.

Date of Order.

May 15, 1884, *Jackson avenue, from Tyler street to Van Zandt street.*

June 19, " *Benefit street, from south line of the estate of the First Congregational Society to Benevolent street.*

Drain or Gutter for Surface Water.

No. of Resolution. Date of Approval.

325. June 28, 1884, *Seymour street, from Eddy street to inlet to Burgess cove in Seymour street.*

To Take Possession of.

April 10, 1884, *Ashburton street to Charles street.*

Twenty permits to open streets were granted during the quarter.

The amount of bills approved on account of Highways, from April 1 to June 30, 1884, inclusive, was $57,053 38

Classified as follows :—

Cleaning streets	$8,469 16
Repairs on unpaved streets	8,545 68
Repairs on paved streets	3,473 41
Paving and crosswalk stone	6,196 05
Crushed stone, materials and labor	6,325 06
Barn expenses	1,724 72
Salaries—superintendent, clerks and inspectors	1,473 50
Blacksmith and wheelwright shop	1,321 47
Repairs on stone-crushers	808 11
Labor on materials	721 99
Tools, implements, etc	560 97
Horses, wagons, carts, harnesses, etc	484 89
John Flanagan, (on account)	400 00
Amount carried forward	$40,505 01

Amount brought forward	$40,505 01	
Harness shop, materials and labor	371 36	
Steam rollers, repairs and supplies	250 06	
Fencing streets, materials and labor	239 21	
Watchman at city yard	196 00	
Cleaning streets from ice and snow	69 42	
Office expenses—city yard	36 59	
Sundries	26 46	
Telephone lines	15 84	
		$41,709 95

New Work—Building and Re-building Streets, Including that Ordered by the City Council.

Sidewalks Curbed and Gutters Paved.

Branch avenue, from near Smithfield avenue to near Opper street	$306 95	
Branch avenue, from Slocum street to Vandewater street	39 64	
Clinton street, from Broad street to Prairie avenue	1,314 32	
Dean street, from Fountain street to High street	544 35	
Holden street, from Beach street to Smith street	982 09	
Manning street, from Governor street to Gano street	757 34	
Mawney street, from Greenwich street to Updike street	929 75	
Pearl street, from Cranston street to Broad street	1,400 24	
Polk street, from Pettis street to Hedley street	1,002 56	
Providence street, from Dudley street to Pearl street	1,104 72	
Somerset street, from Friendship street to West Clifford street	325 53	
Somerset street, from West Clifford street to Providence street	356 86	
Transit street, from Governor street to Ives street	529 60	
Wayland street, from Waterman street to Pitman street	94 48	
Willard street, from Plain street to Eddy street	766 54	

Macadamized.

Atwell's avenue	$901 75	
Point street	778 64	
Stevens and Hewes streets	981 13	
Amounts carried forward	$13,116 49	$41,709 95

Amounts brought forward	$13,116 49	$41,709 95

WORKED TO GRADE.

Branch avenue, from North Main street to Douglas avenue	$1,831 54	

REPAIRED.

Diman place	$395 40	
		$15,343 43
		$57,053 38

Bills deposited with the City Treasurer for collection, from April 1, to June 30, 1884, inclusive, amounted to $929.70.

As follows :—

Labor and materials	$486 22
Street sweepings	231 44
Old iron	123 29
Manure from barn	71 25
Pasturage of gravel lot	15 00
Chopping blocks	2 50
	$929 70

During the quarter, coupons for bills collected have been returned by the City Treasurer and receipted for, amounting to $536.10.

As follows :—

Paving and crosswalk stone	$201 78
Street sweepings	156 32
Manure from barn	73 13
Labor and materials	68 51
Chopping blocks	15 50
Pasturage of gravel lot	15 00
Tools	5 86
	$536 10

The amount of expenditures on account of sidewalks and curbing, from April 1, to June 30, 1884, inclusive, was $4,208.10.

Bills deposited with the City Treasurer for collection, on account of sidewalks and curbing, from April 1, to June 30, 1884, inclusive, was $15,249.76.

During the quarter, coupons from sidewalks and curbing bills collected, have been returned by the City Treasurer and receipted for, amounting to $1,122.56.

WATER WORKS.

June 4, 1884, an offer of Edward R. Crowell to do the painting of the fence and railings at Hope Station and the roof of Hope Engine-house for the sum of one hundred and sixty-nine dollars, was accepted.

June 9th, a contract was executed with the Board of State Charities and Corrections to supply the institutions at the State Farm with Pawtuxet water for five years from the date of turning on the water, for the sum of fifteen hundred dollars per annum, payable quarterly. The water was turned on June 21, 1884.

During the quarter ending June 30, 1884, water pipes were laid, under resolutions of the City Council, as follows, viz.:

No. of Resolution.	Date of Approval.	
313.	Sept. 6, 1882,	*Reservoir avenue and Jordan street:* —731.5 feet of six-inch pipes.
429.	Oct. 23, 1883,	*Norwood avenue, from Manton avenue to Worsted avenue, and in Worsted avenue, westerly:*—635.10 feet of six-inch and 1.9 feet of eight-inch pipes.

No. of Resolution.	Date of Approval.	
441.	Nov. 7, 1883,	*Alverson street, Johnston, from Plainfield street, northerly:*—655.6 feet of six-inch pipes.
443.	" " "	*Court on southerly side of Orms street, between Carroll and Jefferson streets:*—196.4 feet of six-inch pipes.
445.	" " "	*Miller street, from present end of pipe, to Gilbert street, and in Gilbert street from Miller street to Hammond street:*—220.5 feet of six-inch pipes.
470.	" 24, "	*Althea street, from Cranston street, easterly:*—460.8 feet of six-inch pipes.
110.	Mar. 10, 1884,	*Dahlia street, from present end of pipe, easterly:*—555 feet of six-inch pipes.
111.	" " "	*Tell street, from end of pipe between Almy street and Courtland street, westerly:*—73.5 feet of six-inch pipes.
153.	Apr. 16, "	*Pavilion avenue, from present end of pipe, easterly:*—11.8 feet of six-inch pipes.
154.	" " "	*Rye street, Johnston, from Plainfield street, southerly:*—273.5 feet of six-inch pipes.
155.	" " "	*Searle street, from Sayles street to Oxford street:*—360.5 feet of six-inch pipes.
156.	" " "	*Tiffany street, from Chalkstone avenue, northerly:*—181 feet of six-inch pipes.
157.	" " "	*Union avenue, from Burrington street, southerly:*--203.3 feet of six-inch pipes.

No. of Resolution.	Date of Approval.	
165.	Apr. 24, 1884,	*Pekin street, from present end of pipe, northerly:*—82.8 feet of six-inch pipes.
172.	" " "	*Calder street, from present end of pipe, southerly:*—193.1 feet of six-inch pipes.
173.	" " "	*Niagara street, from present end of pipe, southerly:*—556 feet of six-inch pipes.
180.	" 29, "	*North street, Johnston, from present end of pipe to Eddy street, and in Eddy street, southerly:*—511.3 feet of six-inch pipes.
181.	" " "	*Woodward road, from Branch avenue, northerly:*—1,092.5 feet of eight-inch pipes.
229.	May 24, "	*Earley street, from Broad street, westerly:*—873.7 feet of six-inch pipes.
230.	" " "	*George street, from Thayer street, easterly:*—143.5 feet of eight-inch pipes.
231.	" " "	*Glenham street, from Broad street, easterly:*—285.5 feet of six-inch pipes.
232.	" " "	*McDonough street, from Norfolk street, easterly, to connect with pipes in Marvin street:*—388.4 feet of six-inch pipes.
233.	" " "	*Penn street, from Tobey street, easterly:*—250.3 feet of six-inch pipes.
307.	June 28, "	*Beaufort street, from Academy avenue to Pemberton street:*—408 feet of six-inch pipes.

No. of Resolution. Date ot Approval.

310. June 28, 1884, *Rye street, Johnston, from present end of pipe, southerly, to Princeton street*:—270.7 feet of six-inch pipes.
Fallon avenue:—47.4 feet of six-inch pipes.
Providence street:—912.1 feet of six-inch pipes.
Somerset street:—77.9 feet of six-inch pipes.

Length of 6-inch pipes laid during the quarter	9,415.7 feet.
Length of 8-inch pipes laid during the quarter	1,237.9 feet.
Total	10,653.6 feet.

Statement of sizes and lengths of pipes laid since the commencement of the work:—

36-inch	10,084	feet.
30-inch	59,637	feet.
24-inch	23,942	feet.
20-inch	6,854.8	feet.
16-inch	31,574	feet.
12-inch	54,089.6	feet.
10-inch	14,758.1	feet.
8-inch	135,305.35	feet.
6-inch	609,151.37	feet.
Total	945,396.22	feet.

or, 179.0523 miles.

The work of laying the following water pipes, completing the list ordered by the City Council, had not been commenced June 30, 1884, viz.:—

No. of Resolution. Date of Approval.

160. May 7, 1883, **Knightsville road, or Park avenue, from Reservoir avenue to Elmwood avenue.*

*916 feet of six-inch pipes ordered in this street have not been laid.

No. of Resolution.	Date of Approval.	
440.	Nov. 7, 1883,	*Abbott street, from present end of pipe, westerly, about 105 feet.*
204.	May 7, 1884,	*Wellington and East Beacon streets, about 190 feet.*
263.	June 5, "	*Potter's avenue, from Prairie avenue, westerly, about 230 feet.*
295.	" 28, "	*Wellington street, Cranston, from Park avenue, southerly, about 300 feet.*
296.	" " "	*Woodbine street, Cranston, from Park avenue, northerly, about 487 feet.*
306.	" " "	*Armington street, Cranston, from Broad street, easterly, about 2,569 feet.*
308.	" " "	*Henry street, from present end of pipe, westerly, to Updike street.*
309.	" " "	*Ocean street and Fort avenue, Cranston, to connect with pipes now laid in said streets.*
327.	" " "	*Burnside street, from Potter's avenue to Public street.*
328.	" " "	*Harold street, from end of pipe in Harvest street to about 95 feet north of Harvest street.*

Seven fire hydrants have been set during the last quarter, one in each of the following locations:—

Althea street, north side, 383 feet east of Cranston street.
Clinton street, north side, 129 feet east of Taylor street.
Dahlia street, northeast corner of Brattle street
Jordan street, northeast side, 205 feet northwest of Reservoir ave.
Providence street, northwest corner of Portland street.
Providence street, northwest corner of Linden street.
Woodward road, at the northwest corner of Woodward court.

The total number of fire hydrants is now twelve hundred and sixteen; twelve hundred and ten flush and six post hydrants.

During the quarter ending June 30, 1884, one hundred and seventy-one water meters were set, of which seventy-four were to replace condemned meters. The use of eleven meters was discontinued. The following water meters were in use at the close of the quarter.

KIND.	SIZES.							Total.
	⅝ in.	¾ in.	1 in.	1½ in.	2 in.	3 in.	4 in.	
Ball & Fitts, Piston	2,864	548	128	47	7	1	.....	3,595
Ball & Fitts, Rotary	1	.....	22	27	3	7	3	63
Crown	1,378	237	76	23	11	2	2	1,729
Fales, Jenks & Sons	207	161	13	2	2	.....	2	387
Worthington	146	1	.....	.....	.....	.....	1	148
	4,596	947	239	99	23	10	8	5,922

Five plumber's licenses were issued during the quarter, making the total number in force June 30, 1884, fifty-seven; all of which expire December 31, 1884.

Eight hundred and seventy-six permits to do plumbing work, were issued during the quarter.

Two hundred and fifty-six applications for water have been made during the quarter, making the total number June 30, 1884, twelve thousand five hundred and one.

The number of new sericce stops opened during the last quarter was two hundred and five.

The total number of service stops opened June 30, 1884,

inclusive, was eleven thousand, seven hundred and ninety-five. The number in actual use June 30, 1884, was eleven thousand one hundred and eighty-nine.

The average daily consumption of water during the last quarter, was 3,969,363 gallons.

The amount of bills approved on account of water works. from April 1, to June 30, 1884, inclusive, was

For construction and extension, . . $14,840 83

Classified as follows:

Cast iron water pipes	$2,826 20
Special castings	2,462 65
Service pipe	1,893 85
Laying water pipes	1,820 74
Fire hydrants, boxes and covers	1,404 63
Stop valves	1,320 00
Taps and stops	1,062 89
Laying service pipes	916 47
Barn expenses	293 69
Horse and wagon account	291 20
Water pipes in Fort avenue, Pawtuxet	261 00
Wharf salaries	150 00
Labor on and carting pipes	80 04
Tools	57 47
	$14,840 83

For maintenance, ... $17,508 52

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$1,445 32
Sundries	694 31
Engineers	600 00
Firemen	405 00
Corliss pumping engine and house	576 60
Amount carried forward	$3,721 23

Amount brought forward	$3,721 23	
Superintendence	249 99	
Real estate, repairs, etc	219 73	
Lights	176 40	
Oil, waste and packing	158 32	
Labor on fuel	124 88	
Care of grounds	107 40	
Barn expenses	28 31	
Worthington pumping engine	12 89	
Horse and wagon account	3 07	
		$4,802 22

SOCKANOSSET RESERVOIR.

Watchman	$138 00	
Care of reservoir and grounds, gate houses, etc.	43 78	
		$181 78

HOPE PUMPING STATION.

Engineers	$800 01	
Firemen	360 00	
Lights	141 40	
Sundries	115 17	
Oil, waste and packing	74 93	
Corliss pumping engine	92 42	
Nagle pumping engine	14 49	
Coal and wood	8 00	
		$1,606 42

HOPE RESERVOIR.

Watchman	$207 00	
Care of reservoir and grounds, gate houses, etc.	258 45	
		$465 45

PIPE LINE AND SERVICE STOPS.

Superintendence, salaries and expenses	$600 00	
Repairs	586 53	
		$1,186 53

METER DEPARTMENT.

Water meters	$4,675 89	
Setting and repairing meters	1,193 93	
		$5,869 82
Amount carried forward		$14,112 22

Amount brought forward		$14,112 22

OFFICE.

Clerks and inspectors' salaries		$1,891 66

MISCELLANEOUS.

Superintendent's clerks	$393 75	
Water, erroneous charge returned	344 28	
Horse and wagon account	199 74	
Barn expenses	183 34	
Telephone lines	131 10	
Examination of the Pawtuxet	98 70	
Public drinking fountains and troughs	68 90	
Sundries	64 23	
Pipe yard, office expenses	15 95	
Analyses of water	4 65	
		$1,504 64
		$17,508 52

The amount of expenditures from April 1, to June 30, 1884, inclusive, was	$32,349 35
The total expenditure to June 30, 1884, inclusive, was	6,032,279 15
The *net* expenditures for construction and extension from April 1, to June 30, 1884, was	13,437 90
The *net* expenditures for construction and extension to June 30, 1884, inclusive. was	4,952,964 78
The *net* expenditures for maintenance from April 1, to June 30, 1884, inclusive, was	13,760 44
The *net* expenditures for maintenance to June 30, 1884, inclusive, was	615,754 67

Bills deposited with the City Treasurer for collection, from April 1, to June 30, 1884, inclusive, amounted to $36,739 46

As follows:

Water	$30,702 14
Water meters	4,011 00
Setting and repairing meters	842 62
Rent of real estate	208 02
Repairs on pipe line	45 63
Amount carried forward	$35,809 41

Amount brought forward	$35,809 41
Permanently closing service stops	35 00
Penalties	16 00
Manure from barn	9 26
Tools	9 00
Cast iron water pipes	543 04
Labor and materials, laying service pipes	245 49
Post hydrant	37 00
Stop valve	16 00
Special castings	10 46
Manure from barn	8 80
	$36,739 46

During the quarter, coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to, . $34,515 90

As follows:

Water	$29,344 24
Water meters	2,820 30
Setting and repairing meters	756 16
Rent of real estate	93 77
Repairs on pipe line	44 50
Permanently closing service stops	30 00
Penalties	18 00
Tools	6 00
Cast iron water pipe	1,058 17
Labor and materials, laying service pipes	148 93
Stop valves	74 00
Labor and materials, laying water pipes	46 10
Post hydrant	37 00
Special castings	27 86
Taps and stops	6 87
Labor on, and carting pipes	4 00
	$34,515 90

SEWERS.

June 2, 1884, contracts for the construction of sewers, which have since been executed, were awarded as follows, viz.:

[The amounts given below are what it is estimated will be paid the contractors for labor, and does not include the cost of inspection and materials.]

To James J. Newman.

No. of Resolution.	Date of Approval.		
460.	Nov. 19, 1883,	*East street from Transit street to Wickenden street,*	$450 30
203.	May 7, 1884,	*Africa and Tefft streets, from America street to Federal street,* . . .	758 90

To John Keogh.

91.	March 10, 1884,	*Waterman street, from summit west of Brown street to Thayer street,*	$1,348 50

June 9th, the proposal of Manchester & Hudson to furnish, delivered in this city, fifteen hundred feet of 15-inch sewer pipe; sixty feet of 15-inch by 8-inch branches; six hundred feet of 15-inch by 6-inch branches; six thousand feet of 12-inch pipes; one hundred and fifty feet of 12-inch by 8-inch branches; twenty-one hundred feet of 12-inch by 6-inch branches; two thousand feet of 8-inch pipes, and fifty 8-inch one-eighth bends, was accepted. A contract has since been executed with said firm, the total amount of which is $7,156.10.

During the last quarter, sewers have been constructed in the following named streets:

No. of Resolution.	Date of Approval.	
460.	Nov. 19, 1883,	*East street, from Transit street to Wickenden street.*
171.	April 24, 1884,	*Friendship street, from Stewart street to Pearl street.*

203. May 7, 1884, *Africa and Tefft streets, from America street to Federal street.*

An additional catch-basin, to facilitate the grading of the street, has been built as follows, viz.:

On Dyer street, near Custom House street.

The work of constructing the following sewer is in progress, viz.:

No.	Resolution. Date of Approval.	
91.	March 10, 1884,	*Waterman street, from summit west of Brown street to Thayer street.*

Work upon the following sewers, completing the list ordered by the city council, had not commenced June 30, 1884, viz.:

No.	Resolution. Date of Approval.	
397.	Oct. 7, 1882,	*Orms street, from Carroll street to present end of sewer in Orms street.*
219.	May 24, 1884,	*Nichols street, from Walling street to Nash lane.*
262.	June 5, 1884,	*Stimson avenue, from Angell street to Hope street.*

Assessments for the cost of constructing sewers in the following named streets have been completed and certified to the City Treasurer, viz.:

John, from Brook to Thayer	$894 91
Providence, from Pearl to Dudley	1,927 59
Wickenden, from Ann to Hope	500 71
Hayward, from Pearl, easterly	229 28
Hopkins and South Main	1,850 68
Clinton, from Prairie avenue to Broad	3,246 07
Plain, from Willard to Blackstone	645 39
Willard and Eddy	2,720 80
Amount carried forward	$12,015 43

Amount brought forward	$12,015 43
Codding, from Cranston, northerly	1,057 77
Cranston, from Codding to Pearl	2,072 36
Manning, from Gano to Governor	2,276 19
Holden, from Beach to Smith	3,138 06
Total	$20,559 81

Six drain layers' licenses were issued during the quarter, making the number in force June 30, 1884, eighteen, all of which expire December 31, 1884.

One hundred and sixty-one permits have been issued to drain-layers: ninety-nine for new work, and sixty-two for extension of drains.

The amount of bills approved on account of sewers, from April 1 to June 30, 1884, inclusive, was

For construction. $4,902 81

Charged as follows:—

[illegible] and pipe yard	$625 00
[illegible]	555 39
[illegible]	75 00
[illegible]	31 98
[illegible]	21 88
[illegible] Hemisup street, from Pearl street to Stewart street	1,322 51
[illegible] and Pratt streets	778 51
[illegible] street, from Transit street to Wickham street	449 01
[illegible] Waterman street, from summit west of Prospect street to Thayer street	54 53
[illegible] completed sewers	989 00
	$4,902 81

$5,127 72

Charged as follows :—

Cleaning basins and sewers	$3,005 99
Repairing basins and sewers	332 51
Cleaning and repairing old drains	233 42
Barn expenses	335 05
Salaries,—superintendent and clerks	568 74
Inspection of connections	249 99
Horses, wagons, carts, harnesses, etc	233 91
Tools	142 34
Sundries	16 62
Telephone lines	9 15
	$5,127 72

The *net* expenditures for construction of sewers to June 30, 1884, inclusive, was $1,634,571 03

The *net* expenditures for maintenance of sewers to June 30, 1884, inclusive, was 166,983 10

Bills deposited with the City Treasurer for collection, from April 1, to June 30, 1884, inclusive, amounted to $213 76

As follows :—

Cleaning private drains, etc	$110 35
Manure from barn	37 05
Pumping out cellars, etc	13 95
Filling cisterns	4 00
Private drains laid in streets	40 92
Stone from sewer in Friendship street	3 75
Sewer material	3 74
	$213 76

During the quarter, coupons from bills collected have been returned by the City Treasurer and receipted for, amounting to $145 47

Amount brought forward	$12,015 48
Codding, from Cranston, northerly	1,057 77
Cranston, from Codding to Pearl	2,072 36
Manning, from Gano to Governor	2,276 19
Holden, from Beach to Smith	3,138 06
Total	$20,559 81

Six drain layers' licenses were issued during the quarter, making the number in force June 30, 1884, eighteen, all of which expire December 31, 1884.

One hundred and sixty-one permits have been issued to drain-layers; ninety-nine for new work, and sixty-two for extension of drains.

The amount of bills approved on account of sewers, from April 1, to June 30, 1884, inclusive, was

For construction, ... $4,902 81

Charged as follows:—

Rent of wharf and pipe yard	$625 00
Materials	555 39
Clerks' salaries	75 00
Testing cement	31 98
Tools	21 88
Sewer in Friendship street, from Pearl street to Stewart street	1,322 51
Sewer in Africa and Tefft streets	778 51
Sewer in East street, from Transit street to Wickenden street	449 01
Sewer in Waterman street, from summit west of Brown street to Thayer street	54 53
Contract reservations on completed sewers	989 00
	$4,902 81

For maintenance, ... $5,127 72

Charged as follows:—

Cleaning basins and sewers	$3,005 99
Repairing basins and sewers	332 51
Cleaning and repairing old drains	233 42
Barn expenses	335 05
Salaries,—superintendent and clerks	568 74
Inspection of connections	249 99
Horses, wagons, carts, harnesses, etc	233 91
Tools	142 34
Sundries	16 62
Telephone lines	9 15
	$5,127 72

The *net* expenditures for construction of sewers to June 30, 1884, inclusive, was $1,634,571 03

The *net* expenditures for maintenance of sewers to June 30, 1884, inclusive, was 166,983 10

Bills deposited with the City Treasurer for collection, from April 1, to June 30, 1884, inclusive, amounted to $213 76

As follows:—

Cleaning private drains, etc	$110 35
Manure from barn	37 05
Pumping out cellars, etc	13 95
Filling cisterns	4 00
Private drains laid in streets	40 92
Stone from sewer in Friendship street	3 75
Sewer material	3 74
	$213 76

During the quarter, coupons from bills collected have been returned by the City Treasurer and receipted for, amounting to $145 47

SEVENTH QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING SEPTEMBER 30, 1884.

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REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., October 1, 1884.

TO THE HONORABLE CITY COUNCIL:

In compliance with the requirements of Chapter 207 of the ordinances, approved February 14, 1883, the Board of Public Works respectfully presents its seventh quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, and the condition and cost of same for the quarter ending September 30, 1884.

HIGHWAYS.

August 22, 1884, the proposals for furnishing coal for the highway department for one year, from September 1, 1884, which had been received, were rejected, and an arrangement was subsequently made with Messrs. R. B. Little & Co. to furnish the coal.

August 30th, the offer of Ernest J. Lippitt, of Lime Rock, R. I., to furnish five hundred feet of straight curbing was accepted. Amount, $275.00.

During the quarter, bills for curbing set and unpaid, and for concreting sidewalks have been certified to the Assessors of Taxes, as follows, viz.:

Curbing bills	$8,372 79
Concreting sidewalk bills	1,419 59

Seven permits have been issued to open streets.

During the last quarter the following streets have been repaired :—

Beacon, from Broad to Plain.
Beacon, from Friendship to Point.
Chalkstone avenue, from Academy avenue westerly.
Clifford, from Eddy to Plain.
Crocker avenue, from Potter's avenue to the railroad.
Fenner, from High to Broad.
Friendship, from Richmond to Eddy.
Friendship, from Beacon to Point.
James, from South Water to Benefit.
Pearl, from Broad to Clifford.
Planet, from South Main to Benefit.
Point, from Chestnut to West Clifford.
Power, from South Main to Benefit.
Richmond, from Broad to Ship.
Sabin, from Cove to Aborn.
Snow, from Broad to Washington.
Spring, from High to Broad.
Stewart, from High to Friendship.
Summer, from High to Friendship.
Transit, from South Main to Benefit.
Valley, where bridge was removed, near Fletcher's mill.
Valley, at foot of River avenue.
Williams, from South Main to Benefit.
Winter, from Cranston to Broad.

During the quarter ending September 30, 1884, the following work was completed, viz. :—

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of Order.		
Jan. 18,	1883,	*Manning street, from Governor to Gano.*
April 19,	"	*Adelaide avenue, from Broad to Niagara.*
Aug. 16,	"	*Vinton street, from Broadway to Carpenter.*
March 24,	1884,	*High, Fenner and Pond streets, adjoining the estate of S.S. Peter and Paul Corporation.*

Pave with Granite Blocks.

No. of Resolution.	Date of Approval.	
363.	Sept. 26, 1883,	*Eddy street, from Westminster to Fulton.*
373.	Aug. 7, 1884,	*Point and Friendship streets, from West Clifford to Pearl.*

To be Brought to Grade.

Date of Order.	
Nov. 15, 1883,	*Highway at corner of Dyer and Pine streets.*
May 15, 1884,	*Jackson avenue, from Tyler to Van Zandt.*

Drain Built.

July 17, 1884, *From foot of Dexter street into Long Pond.*

The following work was, September 30, 1884, in progress as follows, viz. :—

Sidewalks to be Curbed and Gutters Paved.

Date of Order.		
May 17,	1883,	*Lester street, south side, from Gilmore to Harrison:*—Finished except concreting gutters.
May 17,	"	*Constitution street, from Lester to Wilson:*—Finished, except concreting gutters.
Sept. 20,	"	*Taber avenue, from Angell street to a point 100 feet north of Humboldt avenue:*—Finished, except graveling roadway.
July 2,	1884,	*Asia street, from Vinton to Knight, and east side of Knight, from land of Coventry Savings Bank to land of Jones Estate Company:*—Finished, except concreting gutters in Asia street.

Aug. 7, 1884, *Lester street, north side, from Gilmore to Harrison:* — Finished, except concreting gutters.

To be Brought to Grade.

Dec. 27, 1883, *Highway, adjacent to estate of Wanton Durfee and Humphrey Almy, on Dyer and Custom House streets:* — Brought to grade except the portion in front of Humphrey Almy estate, which has been delayed to avoid legal and other difficulties.

No. of Resolution. Date of Approval.

334. July 5, 1884, *North Main street, from Sexton street to Cemetery street:*—Portion of sidewalk has been brought to grade.

To be Repaired.

Date of Order.

Aug. 3, 1882, *Diman place:*— Finished, except removal of a few boulders.

Obstructions to be Removed.

Oct. 4,. 1883, *Branch avenue, from Smithfield avenue to Douglas avenue:*—Obstructions in the way of grading the avenue have been removed so as to make it passable. The line of occupation in places encroaches upon the the avenue as laid out.

CONCRETE SIDEWALKS.

Aug. 3, 1882, *Julian and Capron streets, adjoining Julian street school-house estate:*—Portion in Julian street finished.

TO BE FILLED.

July 17, 1884, *Pond opposite works of the Nicholson File Co.:*—A small portion of the pond has been filled.

The following work ordered by the Board of Aldermen and City Council had not been commenced September 30, 1884, viz.:

SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of Order.

Aug. 3, 1882, *Capron street, in front of Julian street school-house estate.*

Oct. 19, " *Potter's avenue, from Broad to Greenwich.*

Nov. 16, " *Eddy street, from Thurber's avenue to Pavilion avenue.*

Dec. 21, " *Clinton street, from Prairie avenue to Gay street.*

May 7, 1883, *Reservoir avenue, east side, from Greenwich street to the railroad bridge.*

July 19, " *Chalkstone avenue, from Charles street to Black.*

" " " *Cypress street, from North Main to Camp.*

Sept. 20, " *Pike street, from South Main to Benefit.*

" " " *D street, from Lester to Booth.*

" " " *Moore street, from Broad to Updike.*

" " " *Elmwood avenue, west side, from Atlantic street to Adelaide avenue.*

" " " *Greenwich street and Elmwood avenue, east side, from Potter's avenue to Adelaide.*

Oct. 18, 1883, *Arnold street, from East to Governor.*
" " " *Manning street, from Hope to Thayer.*
" " " *Warren street, from Fuller to Dexter.*
Nov. 15, " *Cromwell street, from Greenwich to Dexter.*
" " " *Pearl street, from Beacon to Plain.*
" " " *Wellington street, from East Beacon to Pearl.*
Dec. 31, " *Dexter street, from Cranston to Cromwell.*
May 15, 1884, *Fremont street, from Governor to Ives.*
June 19, " *Carter street, from Greenwich to the railroad.*
June 26, " *Diman place, from Angell street to Asylum wall.*
" " " *Richmond street, from Ship to Point.*
" " " *Stimson avenue, from Hope to Angell.*
Aug. 7, " *North Main street and Pawtucket avenue, from Sexton to Cemetery.*
Sept. 11, " *Doyle avenue, from East avenue to Olney street.*
" 18, " *George street, from Ives to Gano.*
" " " *Miller street, from Division to Dexter.*

CURBSTONES TO BE RE-SET AND GUTTERS RE-PAVED.

Date of Order.
July 17, 1884, *Waterman street, from Brown to Brook.*

PAVE WITH GRANITE BLOCKS.

No. Resolution. Date of Approval.
332. July 5, 1884, *Richmond street, from Ship to Point.*

CONCRETE SIDEWALK.

424. Sept. 13, 1884, *Dover street, south side, from a point 83 feet west of Carlton to Academy avenue.*

Abate Nuisance on

No. of Resolution.	Date of Approval.	
218.	May 20, 1882,	*Mitchell street, caused by overflow of surface water.*

To be Repaired.

Date of Order.	
Nov. 15, 1883, and May 5, 1884,	*Gangway on the northerly side of Fire Station, between Mill and North Main streets, and also the steps known as "Thurber's steps."*

To be Brought to Grade.

Date of Order.	
June 19, 1884,	*Benefit street, from south line of the estate of the First Congregational Society to Benevolent street.*

Drain or Gutter for Surface Water.

No. of Resolution.	Date of Approval.	
325.	June 28, 1884,	*In Seymour street, from Eddy to Burgess cove inlet.*

To Take Possession of.

Date of Order.	
April 10, 1884,	*Ashburton street to Charles.*

The amount of bills approved on account of Highways, from July 1 to September 30, 1884, inclusive, was $65,776.92.

Classified as follows:

Cleaning streets	$7,848 56	
Repairs on unpaved streets	9,162 48	
Repairs on paved streets	1,319 31	
Paving and crosswalk stone	8,463 65	
Crushed stone, materials and labor	6,412 10	
Barn expenses	1,738 90	
Salaries — superintendent, clerks and inspectors	1,711 99	
Tools, implements, etc	1,813 97	
Labor on materials	1,269 77	
Repairs on stone crushers	1,253 08	
Blacksmith and wheelwright shop	1,071 32	
Horses, wagons, carts, harnesses, etc	399 50	
Steam rollers, repairs and supplies	396 47	
Trimming trees	357 07	
Harness shop, materials and labor	341 16	
Watchman at city yard	196 00	
Sundries	45 95	
Telephone lines	39 12	
Watering streets	16 99	
Office expenses, city yard	6 79	
Fencing streets, materials and labor	3 10	
		$43,867 23

NEW WORK, BUILDING AND REBUILDING STREETS.

SIDEWALKS CURBED AND GUTTERS PAVED.

Adelaide avenue, from Broad street to Niagara	$2,102 77	
Asia, from Vinton to Knight	818 35	
Clinton, from Broad to Prairie avenue	8 38	
Constitution, from Lester to Wilson	1,168 31	
Cypress, from North Main to Camp	18 37	
Dean, from Fountain to High	44 35	
High, Fenner and Pond, adjoining the estate of SS. Peter and Paul Corporation	351 60	
Holden, from Beach to Smith	11 95	
Lester, north side, from Gilmore to Harrison	518 55	
Lester, south side, from Gilmore to Harrison	532 95	
Manning, from Governor to Gano	1,425 41	
Mawney, from Greenwich to Updike	204 54	
Providence, from Dudley to Pearl	222 71	
Amounts carried forward	$7,428 24	$43,867 23

Amounts brought forward	$7,428 24	$43,867 23
Somerset, from Friendship to West Clifford	47 43	
Somerset, from West Clifford to Providence	44 79	
Taber avenue, from Angell street to near Humboldt avenue	983 02	
Transit, from Governor to Ives	471 39	
Vinton, from Broadway to Carpenter	620 85	
WORKED TO GRADE.		
Branch avenue, from North Main street to Douglas avenue	280 68	
Jackson avenue, from Tyler street to Van Zandt	979 53	
North Main street, from Sexton to Cemetery	2,040 59	
Dyer and Pine streets	712 69	
PAVE WITH GRANITE BLOCKS.		
Eddy street, from Westminster to Fulton	1,331 72	
Point and Friendship streets	1,473 25	
MACADAMIZED.		
Point street	3,274 13	
REBUILD.		
Manton avenue	1,576 39	
BUILD DRAIN.		
Dexter street, foot of, to Long pond	645 49	
		21,909 69
		$65,776 92

Bills deposited with the City Treasurer for collection, from July 1 to September 30, 1884, inclusive, amounted to $365.70.

As follows:

Street sweepings	$212 91
Manure from barn	84 38
Labor and materials	35 76
Sundries	14 00
Tools	16 40
Chopping blocks	2 25
	$365 70

During the quarter, coupons for bills collected have been returned by the City Treasurer and receipted for, amounting to $881.24.

As follows:

Paving and crosswalk stone	$372 56
Labor and materials	238 72
Street sweepings	182 46
Manure from barn	71 25
Sundries	14 00
Chopping blocks	1 75
Tools	50
	$881 24

The amount of bills approved on account of Highways during the fiscal year ending September 30, 1884, was $210,306.57.

Charged as follows:

Cleaning streets	$22,922 80	
Repairs on unpaved streets	29,068 58	
Repairs on paved streets	5,114 37	
Paving and crosswalk stone	27,018 66	
Crushed stone, materials and labor	24,779 49	
Barn expenses	8,016 31	
Salaries—superintendent, clerks and inspectors	5,690 11	
Tools, implements, etc	4,626 46	
Labor on materials	4,110 93	
Repairs on stone crushers	3,254 00	
Blacksmith and wheelwright shop	4,820 29	
Horses, wagons, carts, harnesses, etc	2,272 41	
Steam rollers—repairs and supplies	1,064 09	
Harness shop, materials and labor	1,468 29	
Watchman at city yard	724 16	
Trimming trees	357 07	
Fencing streets, materials and labor	324 14	
Watering streets	196 99	
Sundries	174 01	
Office expenses—city yard	89 70	
Telephone lines	58 64	
Repairing sidewalks	21 20	
John Flanagan, on account	400 00	
Cleaning streets from ice and snow	4,975 46	
Amount carried forward		$151,548 16

Amount brought forward		$151,548 16

NEW WORK, BUILDING AND REBUILDING STREETS.

SIDEWALKS CURBED AND GUTTERS PAVED.

Adelaide avenue, from Broad to Niagara	$2,102 77	
Asia, from Vinton to Knight	818 35	
Audrey, from Bowdoin to Delaine	548 60	
Bath, from Chalkstone avenue to Orms street	96 43	
Beach, south side, from Park to land of Brown & Sharpe Manufacturing Co	135 82	
Branch avenue, from near Smithfield avenue to near Opper street	4,326 37	
Branch avenue, from Slocum street to Vandewater	994 73	
Chestnut, from Elm to Bassett	141 82	
Clinton, from Broad to Prairie avenue	1,688 86	
Constitution, from Lester to Wilson	1,168 31	
Cypress, from North Main to Camp	18 37	
Dean, from Fountain to High street	588 70	
Delaine, from the bridge to Appleton	564 85	
Greenwich, west side, from Earl to Reservoir avenue	8 55	
High, Fenner and Pond, adjoining the estate of SS. Peter and Paul Corporation	351 60	
Holden, from Beach to Smith	1,137 56	
Lester, north side, from Gilmore to Harrison	518 55	
Lester, south side, from Gilmore to Harrison	532 95	
Manning, from Governor to Gano	2,209 19	
Mawney, from Greenwich to Updike	1,265 71	
Moore, from Greenwich to Updike	71 12	
North Main, from Mill to Olney	3 00	
Pearl, from Cranston to Broad	1,400 24	
Polk, from Pettis to Hedley	1,002 56	
Providence, from Dudley to Pearl	1,327 43	
Reservoir avenue, west side, from Greenwich street to the railroad bridge	12 60	
Somerset, from Friendship to West Clifford	372 96	
Somerset, from West Clifford to Providence	401 65	
Taber avenue, from Angell street to near Humboldt avenue	983 02	
Transit, from Governor to Ives	1,000 99	
Vinton, from Broadway to Carpenter	682 31	
Wayland, from Waterman to Pitman	446 21	
Willard, from Plain to Eddy	766 54	
Amounts carried forward	$27,688 72	$151,548 16

Amounts brought forward	$27,688 72	$151,548 16

WORKED TO GRADE.

Branch avenue, from North Main street to Douglas avenue	4,509 22	
Dyer and Pine	712 69	
Elmwood avenue, from the railroad bridge to the city line	126 15	
Hawkins, from Admiral to Branch avenue	94 68	
Jackson avenue, from Tyler street to Van Zandt	979 53	
North Main, from Sexton to Cemetery	2,040 59	

PAVE WITH GRANITE BLOCKS.

Chestnut, from Bassett to Elm	828 23	
Eddy, from Westminster to Fulton	1,331 72	
Point and Friendship	1,473 25	

MACADAMIZED.

Atwell's avenue	$10,005 45	
Point	4,052 77	
Stevens and Hewes	981 13	

REBUILD.

Manton avenue	1,576 39	

BUILD DRAIN.

Dexter, foot of, to Long Pond	645 49	

SET CURB AND CONCRETE SIDEWALKS.

Mill, in front of city fire station	155 83	

REPAIRED.

Diman place	910 36	
Dorrance, Pine and Orange, in the immediate vicinity of estate of Edward S. Aldrich	134 24	

MAKE CONNECTION WITH SEWER.

Arlington avenue, corner of Angell street	29 00	
Amounts carried forward	$58,275 44	$151,548 16

Amounts brought forward	$58,275 44	$151,548 16
REBUILD WALL.		
Branch avenue, in front of estate of William Gallagher	459 60	
REMOVE OBSTRUCTIONS.		
Vinton, from Broadway to Carpenter	23 37	
		$58,758 41
		$210,306 57

The amount of expenditures on account of sidewalks and curbing from July 1 to September 30, 1884, inclusive, was $7,402.65.

During the quarter, coupons from sidewalks and curbing bills collected have been returned by the city treasurer, and receipted for, amounting to $6,247.71.

The amount of expenditures for sidewalks and curbing during the fiscal year ended September 30, 1884, was $19,169.43.

WATER WORKS.

July 3d, the proposal of Hopkins, Pomroy & Co. to furnish, delivered at Hope Pumping Station, 150 tons stove coal and 250 tons of egg coal, was accepted, and a contract has since been executed with said firm for the delivery of the coal. Amount of contract, $1,780.00.

July 3d, the proposal of Providence Coal Co. to furnish, delivered at Pettaconset Pumping Station, 500 tons egg coal, was accepted, and a contract has since been executed for its delivery. Amount of contract, $2,340.00.

During the quarter ending September 30th, 1884, water pipes were laid, under resolutions of the City Council, as follows, viz: —

12-INCH.

In North Main street and Pawtucket avenue, 511.1 feet.

8-INCH.

In Woodbine street, Cranston, - - 517.1 feet.

6-INCH.

In Abbott, Armington, (Cranston), Bridgham, Burnside, Cypress, East Beacon, first street west of Padelford, Harold, Harvest, Henry, Mutual, Ocean, (Cranston), Rye, (Johnston), Second, Stansbury, Sweetbriar, Touro, Valley, Wellington, Wellington, (Cranston), and Whitmarsh streets; in Adelaide, Dyer, (Cranston), Fort, (Cranston), Potter's and Stimson avenues, and in Carr court, - - - - - - - - 12,279.3 feet.

Total, - - - - - - 13,307.5 feet, or 2.5204 miles.

Statement of sizes and lengths of pipes laid since the commencement of the work: —

36-inch	10,084	feet.
30-inch	59,637	feet.
24-inch	23,942	feet.
20-inch	6,854.8	feet.
16-inch	31,574	feet.
12-inch	54,600.7	feet.
10-inch	14,758.1	feet.
8-inch	135,822.45	feet.
6-inch	621,426.77	feet.
Total	958,699.82	feet,

or, 181.5719 miles.

The work of laying the following water pipes, completing the list ordered by the City Council, had not been commenced September 30, 1884, viz.: —

No. of Resolution.	Date of Approval.	
160.	May 7, 1883,	**Knightsville road, or Park avenue, from Reservoir avenue to Elmwood avenue.*
375.	Aug. 8, 1884,	*†Dyer avenue and Corry street, Cranston.*
395.	Sept. 3, "	*Rhodes place, from Broad street, westerly, about 453 feet.*
429.	" 16, "	*Douglas avenue, from present end of pipe, northerly, about 478 feet.*

Four fire hydrants have been set during the last quarter, one in each of the following locations: —

Second street, north side, about 251 feet east of North Main street.
Valley street, west side, about 145 feet south of Atwell's avenue.
Valley street, west side, about 548 feet south of Atwell's avenue.
Stimson avenue, north side, about 120 feet west of Diman place.

The total number of fire hydrants is now twelve hundred and twenty; twelve hundred and fourteen flush, and six post hydrants.

The average daily consumption of water during the last quarter was 4,416,256 gallons.

During the quarter ending September 30, 1884, one hundred and sixty-eight water meters were set, of which thirty-nine were to replace condemned meters. The use of two meters was discontinued. The following meters were in use at the close of the quarter:

* 916 feet of six-inch pipes ordered in this street have not been laid.
† That portion in Corry street not laid.

KIND.	SIZES.							Total
	⅝ in.	¾ in.	1 in.	1½ in.	2 in.	3 in.	4 in.	
Ball & Fitts, Piston	2,864	548	128	47	7	1	....	3,596
Ball & Fitts, Rotary	1	....	22	27	3	7	3	61
Crown	1,503	266	83	25	11	3	2	1,[illegible]
Fales, Jenks & Sons	187	140	9	1	2	....	2	3[illegible]
Worthington	145	1	....	....	1	....	1	1[illegible]
	4,700	964	242	100	24	11	8	6,[illegible]

Six hundred and fifty-nine permits to do plumbing were issued during the quarter.

One hundred and seventy-one applications for water have been made during the quarter, making the total number September 30, 1884, twelve thousand six hundred and seventy-two.

The number of new service stops opened during the last quarter was one hundred and eighty-seven.

The total number of service stops opened to September 30, 1884, inclusive, was eleven thousand nine hundred and eighty-two. The number in actual use September 30, 1884, was eleven thousand three hundred and seventy-two.

The amount of bills approved on account of water works, from July 1, to September 30, 1884, inclusive, was

For construction and extension, . . $26,877 83

Classified as follows:

Cast iron water pipes	$20,509 88
Laying water pipes	2,395 24
Laying service pipes	745 43
Purchase of water pipes in Sea View avenue, Pawtuxet	950 00
Special castings	673 65
Rent of wharf and pipe yard	625 00
Barn expenses	365 26
Labor on and carting pipes	252 14
Wharf salaries	150 00
Sundries	125 00
Tools	20 98
Horse and wagon account	65 25
	$26,877 83

For maintenance, ... $21,423 00

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$1,727 95	
Sundries	915 27	
Care of grounds, etc	828 65	
Engineers	800 00	
Firemen	637 50	
Superintendence	333 32	
Lights	244 33	
Oil, waste and packing	205 55	
Corliss pumping engine and house	203 95	
Labor on fuel	78 48	
Barn expenses	42 01	
Real estate: repairs, etc	14 60	
Engine house, (Cornish)	5 37	
Horse and wagon account	2 86	
		$6,039 84

SOCKANOSSET RESERVOIR.

Watchman	$183 00	
Care of reservoir and grounds, gate houses, etc.	108 07	
		$291 07
Amount carried forward		$6,330 91

Amount brought forward		$6,330 91

Hope Pumping Station.

Coal and wood	$1,755 47	
Engineers	1,066 68	
Firemen	480 00	
Engine house	306 50	
Lights	221 64	
Oil, waste and packing	75 21	
Nagle pumping engine	65 05	
Sundries	41 31	
		$4,011 86

Hope Reservoir.

Watchman	$274 50	
Care of reservoir and grounds, gate houses, etc.	361 59	
		$636 09

Pipe Line and Service Stops.

Superintendence: salaries	$800 00	
Repairs	362 20	
		$1,162 20

Meter Department.

Water meters	$3,626 60	
Setting and repairing meters	1,425 76	
		$5,052 36

Miscellaneous.

Clerks and inspectors' salaries	$3,123 60	
Analyses of water	306 00	
Telephone lines	295 66	
Barn expenses	173 10	
Horse hire	145 85	
Examination of the Pawtuxet	65 81	
Public drinking fountains and troughs	72 97	
Sundries	40 58	
Horse and wagon account	6 01	
		$4,229 58
		$21,423 00

The amount of expenditures from July 1 to September 30, 1884, inclusive, was	$48,300 83
The total expenditure to September 30, 1884, inclusive, was	6,080,579 98
The *net* expenditures for construction and extension from July 1 to September 30, 1884, inclusive, was	25,115 91
The *net* expenditures for construction and extension to September 30, 1884, inclusive, was	4,978,080 69
The *net* expenditures for maintenance from July 1 to September 30, 1884, inclusive, was	16,026 94
The *net* expenditures for maintenance to September 30, 1884, inclusive	631,781 61

Bills deposited with the City Treasurer for collection, from July 1 to September 30, 1884, inclusive, amounted to $30,363 86

As follows:

Water	$25,612 95
Water meters	3,053 50
Setting and repairing meters	788 66
Rent of real estate	140 52
Permanently closing service stops	30 00
Wood from Pettaconset	22 00
Penalties	8 00
Labor and materials, laying service pipes	279 64
Cast iron water pipe	184 67
Stop valves	125 00
Scrap iron	70 08
Special castings	48 84
	$30,363 86

During the quarter, coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to $36,678.57.

As follows:

Water	$29,446 84
Water meters	4,312 45
Setting and repairing meters	863 27
Rent of real estate	192 27
Amount carried forward	$34,814 83

Amount brought forward	$34,814 83
Permanently closing service stops	30 00
Manure from barn	9 26
Penalties	8 00
Tools	3 00
Repairs on pipe line	1 13
Cast iron water pipe	1,081 72
Labor and materials, laying water pipe	282 42
Labor and materials, laying service pipe	255 44
Special castings	101 95
Stop valves	68 00
Labor on and carting pipes	22 82
	$36,678 57

The amount of bills approved on account of water works, during the fiscal year ended September 30, 1884, was:

For construction and extension, . . $70,763 94

Charged as follows:

Cast iron water pipes	$34,333 41
Laying water pipes	8,008 92
Pawtuxet Water Pipe Co., purchase of plant.	7,000 00
Special castings	3,824 63
Laying service pipes	2,701 11
Stop valves	2,566 67
Service pipe	2,525 04
Taps and stops	1,992 84
Fire hydrants, boxes and covers	1,404 63
Rent of wharf and pipe yard	1,250 00
Barn expenses	1,146 39
Purchase of water pipes in Sea View avenue, Pawtuxet	950 00
Horse and wagon account	729 49
Labor on and carting pipes	492 45
Wharf salaries	481 00
Barn at pipe yard	357 04
Testing second engine at Hope Pumping Station, (account contracted in 1876).	336 10
Water pipes in Fort avenue, Pawtuxet	261 00
Tools	227 19
Sundries	125 00
Superintendent's clerk	51 03
	$70,763 94

For maintenance, ... $74,795 78

Charged as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$5,489 53	
Sundries	2,925 87	
Engineers	2,400 00	
Firemen	1,778 25	
Corliss pumping engine and house	1,093 28	
Superintendence	999 96	
Care of grounds, etc	995 68	
Lights	639 83	
Oil, waste and packing	561 56	
Labor on fuel	381 19	
Real estate: repairs, etc	335 71	
Barn expenses	116 50	
Engine house, (Cornish)	29 05	
Worthington pumping engine	23 37	
Horse and wagon account	16 93	
		$17,786 71

SOCKANOSSET RESERVOIR.

Care of reservoir and grounds, gate houses, etc., including cleaning of reservoir	$1,753 81	
Watchman	549 00	
		2,302 81

HOPE PUMPING STATION.

Engineers	$3,200 04	
Coal and wood	1,763 47	
Firemen	1,440 00	
Lights	512 14	
Engine house	306 50	
Sundries	199 35	
Oil, waste and packing	191 95	
Nagle pumping engine	104 98	
Corliss pumping engine	101 89	
		7,820 32
Amount carried forward		$27,909 84

Amount brought forward		$27,909 84

HOPE RESERVOIR.

Care of reservoir and grounds, gate houses, etc., (including cleaning of reservoir).	$1,724 12	
Watchman	823 50	
		2,547 62

PIPE LINE AND SERVICE STOPS.

Repairs	$3,664 32	
Superintendence: salaries and expenses	2,421 05	
		6,085 37

METER DEPARTMENT.

Water meters	$12,974 86	
Setting and repairing meters	4,582 28	
		17,557 14

MISCELLANEOUS.

Clerks and inspectors' salaries	$10,235 61	
Town of Cranston, tax	4,300 00	
Examination, and prevention of defilement, of the Pawtuxet	2,879 81	
Telephone lines	757 74	
Analyses of water	453 52	
Barn expenses	394 01	
Water, erroneous charge returned	344 28	
Horse and wagon account	292 69	
Horse hire	260 00	
Water rebate, (Pawtuxet Water Pipe Co.)	226 00	
Public drinking fountains and troughs	203 79	
Sundries	151 26	
Pipe yard: office expenses	150 20	
Real estate at Pawtuxet	34 30	
Real estate in Lincoln	12 60	
		20,695 81
		$74,795 78

SEWERS.

July 29th, contracts for the construction of sewers, which have since been signed, were awarded as follows, viz.:

[The amounts given below are what it is estimated will be paid the contractors for labor, and does not include the cost of inspection and materials.]

To John Keogh.

No. of Resolution.	Date of Approval.		
219.	May 24, 1884,	*Nichols street from Walling to Nash lane,* .	$1,191 21

To James J. Newman.

262.	June 5, 1884,	*Stimson avenue, from Hope street to Angell,*	$2,009 70

August 21, the following contract to construct a sewer was awarded and has since been executed, viz.:

To James J. Newman.

385.	Aug. 8, 1884,	*Cypress street, from Camp to North Main,*	$1,739 30*

September 30th, contracts for constructing sewers were awarded as follows, viz.:

To James J. Newman.

407.	Sept. 8, 1884,	*Sheldon street, from Hope to Brook,* . .	$1,209 90

To John Keogh.

427.	Sept. 8, 1884,	*Wilson street, from present end of sewer to Fuller,*	$829 55

*Exclusive of rock excavation for which the contractor is to receive extra.

During the last quarter, the work of constructing sewers has been completed in the following named streets:

No. of Resolution.	Date of Approval.	
91.	Mar. 10, 1884,	*Waterman, from summit west of Brown to Thayer.*
219.	May 24, 1884,	*Nichols, from Walling to Nash lane.*
262.	June 5, 1884,	*Stimson avenue, from Angell to Hope.*

The work of constructing the following sewer is in progress, viz.:

No. of Resolution.	Date of Approval.	
386.	Aug. 8, 1884,	*Cypress street, from Camp to North Main.*

Work upon the following sewers, completing the list ordered by the city council, had not commenced September 30, 1884, viz.:

No. of Resolution.	Date of Approval.	
307.	Oct. 7, 1882,	*Orms street, from Carroll to present end of sewer in Orms.*
407.	Sept. 8, 1884,	*Sheldon street, from Brook to Hope.*
408.	" " "	*Webster and Ashburton streets, from Delhi to Martin.*
427.	" " "	*Wilson street, from terminus of present sewer to Fuller.*

Assessments for the cost of constructing sewers in the following named streets have been completed and certified to the City Treasurer, viz.:

Friendship, from Pearl to Stewart	$1,960 93
Waterman, from near Brown to Thayer	2,462 08
Africa and Tefft	1 251 26
East, from Transit to Wickenden	685 70
	$6,359 97

One hundred and seventy-seven permits have been issued to drain layers; one hundred and one for new work, and seventy-six for extension of drains.

The amount of bills approved on account of sewers from July 1 to September 30, 1884, inclusive, was

For construction, ... $13,317 17

Charged as follows:

Materials	$4,500 21
Rent of wharf and pipe yard	625 00
Clerks' salaries	150 00
Testing cement	21 50
Tools	12 55
Sewer in Africa and Tefft streets	44 90
Sewer in Cypress street, from Camp to North Main	2,775 21
Sewer in East street, from Transit to Wickenden.	42 95
Sewer in Friendship street, from Pearl to Stewart	70 99
Sewer in Nichols street, from Walling to Nash lane	1,339 76
Sewer in Stimson avenue, from Hope to Angell street	2,163 44
Sewer in Waterman street, from summit west of Brown to Thayer	1,555 48
Meadow street connections	15 18
	$13,317 17

For maintenance, ... $6,843 12

Charged as follows:

Cleaning basins and sewers	$3,792 06
Repairing basins and sewers	500 53
Cleaning and repairing old drains	256 54
Barn expenses	606 42
Salaries: superintendent and clerks	729 16
Inspection of connections	333 32
Horses, wagons, carts, harnesses, etc	469 78
Tools	102 14
Telephone lines	49 80
Sundries	3 37
	$6,843 12

The *net* expenditures for construction of sewers to September 30, 1884, inclusive, was	$1,647,833 49
The *net* expenditures for maintenance of sewers to September 30, 1884, inclusive, was	173,711 32

Bills deposited with the City Treasurer for collection, from July 1 to September 30, 1884, inclusive, amounted to $223 55

As follows:

Cleaning private drains, etc	$118 90
Filling cisterns, boilers, etc	25 61
Private drains laid in streets	26 81
Sewer material	50 73
Stone from sewer in Friendship street	1 50
	$223 55

During the quarter, coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to $207 07

As follows:

Cleaning private drains, etc	$97 70
Manure from barn	37 05
Filling cisterns, boilers, etc	17 61
Private drains laid in streets	54 71
	$207 07

The amount of bills approved on account of sewers for the fiscal year ended September 30, 1884, was

For construction, ... $39,641 25

Charged as follows:

For materials	$12,630 18
" rent of wharf and pipe yard	1,250 00
" contract reservations on completed sewers	989 00
Amount carried forward	$14,869 18

Amount brought forward	$14,869 18
For clerks' salaries	491 25
" testing cement	185 81
" tools	47 23
" additional catch-basins	14 50
" Broad street, corner of Public, relieved from overflow of surface water	187 40
" sewer in Africa and Tefft streets	823 41
" sewer in Clinton street, from Broad to Prairie avenue	157 74
" sewer in Codding street, from Cranston street, northerly	567 62
" sewer in Cranston street, from Codding to Pearl	1,781 43
" sewer in Cypress street, from Camp to North Main	2,775 21
" sewer in East street, from Transit to Wickenden	491 96
" sewer in Friendship street, from Pearl to Stewart	1,393 50
" sewer in Fulton street, from Union to Eddy	279 81
" sewer in Greenwich and Wickenden streets	14 95
" sewer in Hayward street, from Lockwood to Pearl	3 60
" sewer in Holden street, from Smith to Beach	1,961 00
" sewer in Hospital street, from South to Elm	321 80
" sewer in John street, from Thayer to Brook	759 11
" sewer in Lester street, from A to Saunders	4 95
" sewer in Manning street, from Governor to Gano	1,900 32
" sewer in Nichols street, from Walling to Nash lane	1,339 76
" sewer in Pettis street and Nash lane	10 00
" sewer in Plain street, from Willard to Blackstone	557 69
" sewer in Polk and Hedley streets	22 40
" sewer in Providence street, from Dudley to Pearl	1,395 27
Amount carried forward	$32,356 90

Amount brought forward	$32,356 90
For sewer in Shove street, from Hedley to Nash lane	8 20
" sewer in South Main and Hopkins streets	100 08
" sewer in Stimson avenue, from Hope to Angell street	2,163 44
" sewer in Transit street, from East to Governor	531 71
" sewer in Waterman street, from summit west of Brown to Thayer	1,610 01
" sewer in Wickenden street, from Hope to Ann	553 82
" sewer in Willard and Eddy streets	2,301 91
" Meadow street connections	15 18
	$39,641 25

For maintenance, ... $21,410 54

Charged as follows:

Cleaning basins and sewers	$12,118 45
Repairing basins and sewers	1,299 69
Cleaning and repairing old drains	808 05
Salaries: superintendent and clerks	2,030 40
Barn expenses	1,843 55
Horses, wagons, carts, harnesses, etc.	1,131 11
Tools	1,086 68
Inspection of connections	999 96
Telephone lines	58 95
Sundries	33 70
	$21,410 54

CHAS. E. CARPENTER, } *Board of*
CLINTON D. SELLEW, } *Public Works.*

EIGHTH QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE.

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QUARTER ENDING DECEMBER 31, 1884.

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1885.

EIGHTH

QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING DECEMBER 31, 1884.

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REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., January 1, 1885.

TO THE HONORABLE CITY COUNCIL:

In compliance with the requirements of Chapter 207, of the ordinances, approved February 14, 1883, the Board of Public Works respectfully presents its eighth quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, and the condition and cost of same for the quarter ending December 31, 1884.

HIGHWAYS.

October 8, 1884, the offer of the New England Granite Works to furnish, delivered on cars in this city, fifteen hundred feet of curbing was accepted. Amount, $825.00.

October 9th, proposals for furnishing curbing were opened under advertisement dated September 23, 1884, and the proposals of Booth Brothers, of New London, Conn., to furnish fifteen thousand feet, and Joseph H. West, of Franklin, Maine, to furnish five thousand feet, were accepted. Contracts were subsequently executed which amount to $10,150.00.

October 10th, the offer of Thomas B. Ross & Son to furnish the materials, put in the foundation and concrete the gangway between North Main and Mill streets known as "Thurber's steps," for the sum of two hundred and thirty-nine dollars, was accepted. After acceptance of this offer,

by mutual agreement the work was postponed temporarily because the Union Railroad Company were to begin at once the erection of a brick building, the southerly foundation of which would undermine and injure said steps.

October 13th, the offer of the Rhode-Island Concrete Company to repair Eddy street from Broad to Pine, for the sum of one dollar per square yard, with guarantee to keep the street in proper condition for three years, was accepted.

October 29th, an offer of Henry S. Taft, of Northbridge, Mass., to furnish about five hundred and fifty feet of curbing delivered on cars at city yard, was accepted. Amount, $269.50.

December 5th, an offer of Ernest J. Lippitt, of Lime Rock, R. I., to furnish five hundred feet of curbing was accepted. Amount, $250.00.

Seven permits have been issued to open streets.

During the last quarter the following streets have been repaired:

Aborn, from Westminster to Washington.
Carpenter, from Fountain to Marshall.
Carroll, from Smith to Orms.
Charles, near railroad crossing.
Common, from Smith to Davis.
Douglas avenue, from Orms to Eaton.
Federal, from Broadway to Dean.
Fountain, from Dean to Carpenter.
Friendship, from Pearl to Broad.
Messer, from High to Cranston.
Nash lane, from Shove to the bridge.
Pond, from Pearl to the northerly termination.
Potter's avenue, from Greenwich to Wheaton avenue.
Richmond, from Ship to Point.
Shove, from Hedley to Nash lane.
Somerset, from Broad to Friendship.
Thayer, from Transit to Arnold.
Washington, from Dean to Aborn.
Winsor, from Smith to Orms.

During the quarter ending December 31, 1884, the following work was completed, viz.:

Sidewalks Curbed and Gutters Paved.

Date of Order.	
May 17, 1883,	*Lester street, south side, from Gilmore to Harrison.*
" " "	*Constitution street, from Lester to Wilson.*
Sept. 20, "	*Taber avenue, from Angell street to a point 100 feet north of Humboldt avenue.*
" " "	*Pike street, from South Main to Benefit.*
" " "	*D street, from Lester to Booth.*
July 2, 1884,	*Asia street, from Vinton to Knight, and east side of Knight, from land of Coventry Savings Bank to land of Jones Estate Company.*
Aug. 7, "	*Lester street, north side, from Gilmore to Harrison.*
" " "	*North Main street and Pawtucket avenue, from Sexton to Cemetery.*
Nov. 13, "	*Burnside street, abutting the ward room and fire station.*

Concrete Sidewalks.

No. of Resolution.	Date of Approval.	
424.	Sept. 13, 1884,	*Dover street, south side, from a point 83 feet west of Carleton to Academy avenue.*
492.	Oct. 16, "	*Hewes street, from the estate of the American Screw Company to North Main street.*

To be Brought to Grade.

334.	July 5, 1884,	*North Main street, from Sexton to Cemetery.*

To be Repaired.

Date of Order.

Aug. 3, 1882, *Diman place.*

Drain or Gutter for Surface Water.

No. of Resolution. Date of Approval.

325. June 28, 1884, } *In Seymour street, from Eddy to*
518. Oct. 29, " } *Burgess cove inlet.*

Drain to be Built.

517. Oct. 28, 1884, *Broad street, junction of Eddy:* Across land of Gustave Bender.

The following work was, December 31, 1884, in progress as follows, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of Order.

Sept. 20, 1883, *Moore street, from Broad to Updike:* Finished except concreting gutters.

Oct. 18, " *Arnold street, from East to Governor:* Finished except rolling roadway.

" " " *Warren street, from Fuller to Dexter:* Finished except concreting gutters.

Nov. 15, " *Cromwell street, from Greenwich to Dexter:* Partially graded.

To be Brought to Grade.

Dec. 27, 1883, *Highway, adjacent to estate of Wanton Durfee and Humphrey Almy, on Dyer and Custom House streets:* Brought to grade except the portion in front of Humphrey Almy estate, which has been delayed to avoid legal and other difficulties.

Obstructions to be Removed.

Oct. 4, 1883, *Branch avenue, from Smithfield avenue to Douglas avenue:* Obstructions in the way of grading the avenue have been removed

Date of Order.

so as to make it passable. The line of occupation in places, encroaches upon the avenue as laid out.

CONCRETE SIDEWALKS.

Aug. 3, 1882, *Julian and Capron streets, adjoining Julian street school house estate:* Portion in Julian street finished.

TO BE FILLED.

July 17, 1884, *Pond opposite works of the Nicholson File Company:* A small portion of the pond has been filled.

SIDEWALK TO BE CONCRETED AND DRIVEWAYS PUT IN.

No. of Resolution. Date of Approval.

549. Dec. 5, 1884, *Burnside and Public streets, in front of new ward room and fire station:* The driveways have been put in.

The following work, ordered by the Board of Aldermen and City Council, had not been commenced December 31, 1884, viz.:

SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of Order.

Aug. 3, 1882, *Capron street, in front of Julian street school house estate.*

Oct. 19, " *Potter's avenue, from Broad to Greenwich.*

Nov. 16, " *Eddy street, from Thurber's avenue to Pavilion avenue.*

Dec. 21, " *Clinton street, from Prairie avenue to Gay street.*

Date of Order.		
May 7,	1883,	*Reservoir avenue, east side, from Greenwich street to the railroad bridge.*
July 19,	"	*Chalkstone avenue, from Charles street to Black.*
" "	"	*Cypress street, from North Main to Camp.*
Sept. 20,	"	*Elmwood avenue, west side, from Atlantic street to Adelaide avenue.*
" "	"	*Greenwich street and Elmwood avenue, east side, from Potter's avenue to Adelaide.*
Oct. 18,	"	*Manning street, from Hope to Thayer.*
Nov. 15,	"	*Pearl street, from Beacon to Plain.*
" "	"	*Wellington street, from East Beacon to Pearl.*
Dec. 31,	"	*Dexter street, from Cranston to Cromwell.*
May 15,	1884,	*Fremont street, from Governor to Ives.*
June 19,	"	*Carter street, from Greenwich to the railroad.*
" 26,	"	*Diman place, from Angell street to Asylum wall.*
" "	"	*Richmond street, from Ship to Point.*
" "	"	*Stimson avenue, from Hope to Angell.*
Sept. 11,	"	*Doyle avenue, from East avenue to Olney street.*
" 18,	"	*George street, from Ives to Gano.*
" "	"	*Miller street, from Division to Dexter.*
Oct. 16,	"	*Burnett street, from Greenwich to Public.*
" "	"	*Daboll street, from Greenwich to Updike.*
" "	"	*Greenwich street, from Earl to Carter.*
" "	"	*Grove street, from Almy to Tobey.*
" "	"	*Webster street, from Delhi to Ambrose.*

Curbstones to be Re-set and Gutters Re-paved.

Date of Order.		
July 17,	1884,	*Waterman street, from Brown to Brook.*

Pave with Granite Blocks.

No. of Resolution. Date of Approval.

332. July 5, 1884, *Richmond street, from Ship to Point.*

Abate Nuisance on.

No. of Resolution. Date of Approval.

218. May 20, 1882, *Mitchell street, caused by overflow of surface water.*

To be Repaired.

Date of Order.

Nov. 15, 1883, *Gangway on the northerly side of Fire Station, between Mill and*
and
May 5, 1884, *North Main streets, and also the steps known as "Thurber's steps."*

To be Brought to Grade.

Date of Order.

June 19, 1884, *Benefit street, from south line of the estate of the First Congregational Society to Benevolent street.*

No. of Resolution. Date of Approval.

517. Oct. 28, 1884, *Bucklin street, from Carter to Earl.*

To Take Possession of.

Date of Order.

April 10, 1884, *Ashburton street to Charles.*
Dec. 18, " *Clinton street, from present termination to Plain street.*

Granite Wall to be Built.

Date of Order.

Oct. 16, 1884, *Jackson avenue, at estate of Daniel and Mary Sullivan.*

Bills approved on account of Highways, from October 1 to December 31, 1884, inclusive, amounted to $63,053.06.

Classified as follows:

Cleaning streets	$5,755 82	
Repairs on unpaved streets	8,008 35	
Repairs on paved streets	1,773 73	
Paving and crosswalk stone	9,990 51	
Crushed stone, materials and labor	7,151 95	
Barn expenses	1,782 58	
Labor on materials	1,530 21	
Salaries — superintendent, clerks and inspectors	1,067 34	
Tools, implements, etc	947 93	
Blacksmith and wheelwright shop	885 12	
Repairs on stone crushers	656 65	
Harness shop, materials and labor	298 55	
Horses, wagons, carts, harnesses, etc	186 30	
Watchman at city yard	168 00	
Sundries	147 22	
Steam rollers, repairs and supplies	116 46	
Cleaning ice and snow from streets	63 80	
Office expenses, city yard	13 31	
Fencing streets, materials and labor	9 77	
		$40,553 60

NEW WORK, BUILDING AND REBUILDING STREETS.

SIDEWALKS CURBED AND GUTTERS PAVED.

Adelaide avenue, from Broad street to Niagara	$243 75	
Arnold, from East to Governor	511 90	
Asia, from Vinton to Knight	110 04	
Burnside, adjoining ward room and fire station	77 82	
Constitution, from Lester to Wilson	122 79	
Cromwell, from Greenwich to Dexter	6 40	
D, from Lester to Booth	832 69	
Lester, north side, from Gilmore to Harrison	52 57	
Lester, south side, from Gilmore to Harrison	51 22	
Moore, from Broad to Updike	1,603 14	
Pike, from South Main to Benefit	661 49	
Taber avenue, from Angell street to near Humboldt avenue	1,468 54	
Vinton, from Broadway to Carpenter	133 22	
Warren, from Fuller to Dexter	1,289 97	
Amounts carried forward	87,165 54	$40,553 60

Amounts brought forward	$7,165 54	$40 553 60
WORKED TO GRADE.		
North Main, from Sexton to Cemetery	14 378 28	
MACADAMIZED.		
Point street	103 24	
DRAIN OR GUTTER FOR SURFACE WATER.		
Seymour street, from Eddy to Burgess cove inlet	663 29	
Broad and Cambridge streets, to land of Gustave Bender	100 40	
CONCRETE SIDEWALKS.		
Burnside and Public streets, adjoining ward room and fire station	88 71	
		22,499 46
		$63,053 06

Bills deposited with the City Treasurer for collection, from October 1 to December 31, 1884, inclusive, amounted to $7,437.35.

As follows:

Labor and materials	$7,136 37
Street sweepings	193 60
Manure from barn	84 38
Chopping blocks	20 00
Tools	3 00
	$7,437 35

During the quarter, coupons from bills collected have been returned by the City Treasurer and receipted for, amounting to $7,631.21.

As follows:

Labor and materials	$7,112 07
Street sweepings	313 98
Manure from barn	168 76
Chopping blocks	20 50
Tools	15 90
	$7,631 21

Bills approved on account of sidewalks and curbing, from October 1 to December 31, 1884, inclusive, amounted to $4,255.05.

Sidewalks and curbing bills deposited with the City Treasurer for collection, from October 1 to December 31, 1884, inclusive, amounted to $337.57.

During the quarter, coupons from sidewalks and curbing bills collected have been returned by the City Treasurer and receipted for, amounting to $307.62.

WATER WORKS.

Considerable progress has been made in the removal of impurities from the Pawtuxet river, and it is intended to prosecute work upon the residue vigorously on the opening of spring.

November 14, 1884, the proposal of Thomas Phillips & Co., to furnish, delivered on wharf occupied by the city, twelve tons of lead pipe, was accepted. A contract was subsequently executed. Amount of contract, $1,104.00.

November 18th, the offer of the Boston Machine Manufacturing Company to furnish taps and stops was accepted. Amount, $1,248.00.

During the quarter ending December 31, 1884, water pipes were laid under resolutions of the City Council, as follows, viz:

12-INCH.

In Douglas avenue, - - - - 589.1 feet.

8-INCH.

In Bleachery street (Providence), Concord and Trenton streets (Johnston), - - 329.5 feet

6-INCH.

In Ashburton, Ashton, Bark, Beach, Brattle, Clarendon (Cranston), Harriet, Haswell, Hedley, Langdon, Lily, Princeton (Johnston), Spruce, Thayer and Waterman (Johnston) streets; in avenue B, Corry (Cranston), Lexington, Narragansett (Cranston), Pavilion, Potter's, Park (Cranston), Reservoir and Rocky Hill (Johnston) avenues, and in Diman place and Rhodes place (Cranston),	9,798.3 feet.
Total, - - - - -	10,716.9 feet,

or, 2.0297 miles.

Statement of sizes and lengths of pipes laid since the commencement of the work:

36-inch	10,084	feet.
30-inch	59,637	feet.
24-inch	23,942	feet.
20-inch	6,854.8	feet.
16-inch	31,574	feet.
12-inch	55,189.8	feet.
10-inch	14,758.1	feet.
8-inch	136,151.95	feet.
6-inch	632,476 07	feet.
Total	970,667.72	feet.

or, 183.8386 miles.

The work of laying the following water pipes, completing the list ordered by the City Council, had not been commenced December 31, 1884, viz.:

No. of Resolution. Date of Approval.

526. Nov. 8, 1884, *Pawtucket avenue, Seventh street and Highland avenue.*

Four fire hydrants have been set during the last quarter, one in each of the following locations:

Avenue B, north side, 702 feet east of Thayer street.
Douglas avenue, northeast side, 551 feet northwest of River avenue.
Park avenue, Cranston, (post hydrant) south side, 4 feet east of Magnolia street.
Park avenue, Cranston, (post hydrant) south side, 10 feet east of Claredon street.

The total number of fire hydrants is now twelve hundred and twenty-four; twelve hundred and sixteen flush, and eight post hydrants.

The average daily consumption of water during the last quarter was 3,938,259 gallons.

During the quarter ending December 31, 1884, one hundred and fifty-seven water meters have been set, of which forty-six were to replace condemned meters. The use of three meters was discontinued. The following meters were in use at the close of the quarter:

KIND.	SIZES.							Total
	⅝ in.	¾ in.	1 in.	1½ in.	2 in.	3 in.	4 in.	
Ball & Fitts, Piston	2,864	547	128	47	7	1	.....	[illegible]
Ball & Fitts, Rotary	1	.....	22	27	3	7	3	[illegible]
Crown	1,619	292	10	28	11	3	2	[illegible]
Fales, Jenks & Sons	163	137	9	1	2	.....	1	[illegible]
Worthington	138	1	.....	.....	1	.....	1	[illegible]
	4,785	977	249	103	24	11	8	[illegible]

One plumber's license was issued during the quarter, making the total number fifty-eight, all of which expired December 31, 1884.

Seven hundred and sixty-two permits to do plumbing were issued during the quarter.

One hundred and forty-six applications for water were made during the quarter, making the total number December 31, 1884, twelve thousand eight hundred and eighteen.

The number of new service stops opened during the quarter, was one hundred and sixty.

The total number of service stops opened to December 31, 1884, inclusive, was twelve thousand one hundred and forty-two. The number in actual use December 31, 1884, was eleven thousand four hundred and sixty-four.

The following table exhibits the number of service stops opened by months from the commencement to December 31, 1884:

SERVICE STOPS OPENED TO DECEMBER 31, 1884.

MONTHS.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.
January...	.....	54	33	21	34	55	15	49	9	20	7	17	15	21
February..	.....	47	18	18	7	25	23	18	9	19	3	11	9	10
March.....	.....	38	34	63	7	45	32	60	19	46	23	39	11	28
April.....	.....	109	109	108	32	108	82	78	52	58	55	49	55	62
May.....	.....	224	206	147	162	168	136	95	80	84	66	72	78	62
June.....	.....	329	295	151	172	143	114	103	71	109	82	48	64	81
July.....	.....	333	261	127	141	158	83	80	49	75	56	77	66	76
August.....	.....	224	209	123	83	94	91	51	51	39	58	87	60	61
September..	.....	184	147	139	101	94	80	63	44	37	60	67	93	50
October....	.....	138	135	160	92	84	81	78	79	48	61	56	47	65
November..	.....	100	104	185	86	54	73	57	63	54	37	64	49	51
December..	56	83	45	122	60	35	55	45	47	29	40	27	56	44
	56	1,863	1,506	1,364	977	1,068	865	777	573	618	548	614	612	611

The following is a statement of receipts for water, by months, from commencement to December 31, 1884, inclusive:

Months.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.
January..	.....	$40,699 09	$69,356 70	$92,102 10	$106,847 71	$124,146 05	$141,006 51	$147,888 06	$160,370 27	$170,104 89	$175 829 02	$191,367 40	$202,036 39
February	$796 06	4,314 80	3,678 96	4,674 19	2,939 71	5,592 98	5,166 46	3,921 14	3,475 86	3,663 06	3,909 62	3,716 15	3,590 27
March....	6,671 82	6,969 73	9,221 19	4,777 42	6,777 07	9,455 64	4,318 92	4,704 11	6.060 68	5,505 89	11,112 73	1,220 34	9,634 66
April.....	1,668 59	2,810 07	4,936 98	10,093 32	13,384 63	7,722 51	14,965 74	15,146 37	14.095 15	13,844 44	12.683 36	22 891 51	16,874 06
May.....	2,063 41	1,766 28	2,338 59	2,574 92	2,598 33	3,307 32	2,787 37	1,957 18	2,172 65	2,688 74	1,987 79	2,143 14	2.835 52
June.....	8,634 89	8,228 92	2,583 35	8,140 99	6,506 75	8,840 60	4,207 37	3,638 09	6,597 05	11,262 59	2,049 18	7,870 41	2,107 71
July.....	3,488 27	6,214 24	13,756 51	9,035 23	14,055 90	9,350 82	14,758 89	14,351 48	15.613 89	12,495 48	20,268 23	15,007 13	24,908 37
August...	1,818 14	1,441 09	1,953 37	4,001 66	2,344 74	3,295 95	2,872 26	5,194 44	2,591 49	2,268 76	3,360 84	2,154 16	2,430 76
Sept'mb'r	4,933 44	7,560 64	5,541 34	5,393 34	13,053 49	3,313 36	7,457 55	6,129 36	5,794 60	1,353 16	1,410 30	1,407 65	1,560 84
October..	5,070 08	8,745 53	9,697 95	13,578 46	8,623 85	15,865 02	15,335 95	17,794 01	20,094 65	23,654 63	14,100 56	20,313 15	24,387 05
Novemb'r	477 04	872 83	1,511 01	1,291 59	908 43	1,050 65	900 39	893 68	2,085 68	2,874 33	16,367 91	7,983 51	2,598 33
Decemb'r	5,372 77	8,072 87	8,076 42	9,481 49	5,848 12	8,098 49	5,105 92	7,933 86	8.753 09	10,814 90	6,230 23	7,408 34	9.404 40
	$41,103 51	$97,383 09	$132,652 39	$165,144 71	$183,898 73	$200,039 39	$218,883 33	$229,551 78	$247,705 00	$200,530 87	$200,318 77	$283,632 80	$302,308 36

The amount of bills approved on account of water works, from October 1 to December 31, 1884, inclusive, was

For construction and extension, . . $9,326 76

Classified as follows:

Cast iron water pipes	$4,758 43
Laying water pipes	1,776 13
Laying service pipes	626 30
Service pipes	1,111 59
Prevention of defilement of the Pawtuxet.	250 00
Stop valves	209 60
Barn expenses	193 60
Fire hydrants, boxes and covers	133 20
Labor on and carting pipes	88 80
Wharf salaries	75 00
Special castings	59 74
Horse and wagon account	28 02
Tools	12 32
Sundries	4 03
	$9,326 76

For maintenance, ... $14,793 45

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$1,032 04	
Engine house, (Cornish)	573 85	
Sundries	498 00	
Engineers	400 00	
Firemen	327 60	
Oil, waste and packing	307 91	
Superintendence	166 66	
Real estate	59 49	
Cornish pumping engine	56 20	
Labor on fuel	47 40	
Corliss pumping engine and house	37 92	
Barn expenses	23 28	
Care of grounds	9 90	
Horse and wagon account	1 50	
		$3,541 75
Amount carried forward		$3,541 75

Amount brought forward		$3,541 75

Sockanosset Reservoir.

Watchman	$91 50	
Care of reservoir and grounds, gate houses, etc	2 25	
		$93 75

Hope Pumping Station.

Engineers	$533 34	
Firemen	240 00	
Sundries	22 95	
Coal and wood	11 81	
		$808 10

Hope Reservoir.

Watchman	$137 25	
Care of reservoir and grounds, gate houses, etc	100 00	
		$237 25

Pipe Line and Service Stops.

Superintendence: salaries	$400 00	
Repairs	419 73	
		$819 73

Meter Department

Water meters	$2,542 35	
Setting and repairing meters	650 32	
		$3,192 67

Miscellaneous.

Town of Cranston, tax	$4,300 00	
Clerks and inspectors' salaries	1,316 66	
Superintendent's clerks	200 00	
Barn expenses	77 09	
Telephone lines	57 17	
Horse hire	41 66	
Public drinking fountains and troughs	40 50	
Real estate at Pawtuxet	34 30	
Real estate at Lincoln	12 60	
Sundries	11 97	
Pipe yard office expenses	5 25	
Analyses of water	3 00	
		$6,100 20
		$14,793 45

The amount of expenditures from October 1 to December 31, 1884, inclusive, was	$24,120 21
The total expenditure to December 31, 1884, inclusive, was	6,104,700 19
The *net* expenditures for construction and extension from October 1 to December 31, 1884, inclusive, was	8,448 75
The *net* expenditures for construction and extension to December 31, 1884, inclusive, was	4,986,529 44
The *net* expenditures for maintenance from October 1 to December 31, 1884, inclusive, was	8,737 88
The *net* expenditures for maintenance to December 31, 1884, inclusive, was	640,519 49

Bills deposited with the City Treasurer for collection, from October 1 to December 31, 1884, inclusive, amounted to $30,385 59

As follows:

Water	$24,780 39
Water meters	3,932 55
Setting and repairing meters	852 40
Rent of real estate	208 02
Permanently closing service stops	30 00
Repairing service pipes, etc	20 52
Penalties	4 00
Cast iron water pipes	270 73
Labor and materials, laying service pipes	197 88
Stop valves	58 00
Special castings	22 10
Manure from barn at pipe yard	9 00
	$30,385 59

During the quarter coupons from bills collected have been returned by the City Treasurer and receipted for, amounting to $45,023 40.

Water	$37,950 62
Water meters	4,547 80
Setting and repairing meters	1,186 68
Rent of real estate	274 86
Permanently closing service stops	40 00
Repairing service pipes, etc	20 52
Penalties	6 00
Amount carried forward	$44,026 48

Amount brought forward	$44,026 48
Wood from Pettaconset	4 00
Cast iron water pipes	414 36
Labor and materials, laying service pipes	292 59
Stop valves	185 00
Old iron	70 08
Special castings	61 17
Manure from barn at pipe yard	17 80
Taps and stops	1 92
	$45,023 40

SEWERS.

One drain-layer's license was issued during the quarter, making the number issued during the year nineteen, all of which expired December 31, 1884.

During the quarter, one hundred and thirty-seven permits were issued to drain-layers; seventy-seven for new work, and sixty for extension and repair of drains.

September 30th, contracts for the construction of sewers, which have since been signed, were awarded as follows, viz.:

[The amounts given below are what it is estimated will be paid the contractors for labor, and does not include the cost of inspection and materials.]

To John Keogh.

No. of Resolution.	Date of Approval.		
427.	Sept. 16, 1884,	*Wilson street, from present end of sewer to Fuller street,* . .	$829 55

To James J. Newman.

407.	Sept. 8, 1884,	*Sheldon street, from Hope street to Brook street,* . . .	$1,209 90

December 22d, the following contract to construct a sewer was awarded and has since been executed, viz.:

To JOHN KEOGH.

No. of Resolution.	Date of Approval.		
576.	Dec. 18, 1884,	*Beach street, from summit in said street to Holden street,* . .	$437 85

During the last quarter the work of constructing sewers has been completed in the following named streets:

No. of Resolution.	Date of Approval.	
386.	Aug. 8, 1884,	*Cypress street, from Camp to North Main.*
407.	Sept. 8, "	*Sheldon street, from Hope to Brook.*
427.	" 16, "	*Wilson street, from present end of sewer to Fuller street.*
576.	Dec. 18, "	*Beach street, from summit in said street to Holden street.*

Catch-basins have been constructed as follows:

Two on North Main street opposite Evergreen.
Two on Eddy street at Seymour.

Work upon the following sewers, completing the list ordered by the City Council, had not commenced December 31, 1884, viz.:

No. of Resolution.	Date of Approval.	
397.	Oct. 7, 1882,	*Orms street, from Carroll to present end of sewer in Orms.*
408.	Sept. 8, 1884,	*Webster and Ashburton streets, from Delhi to Martin.*

Bills approved on account of sewers from October 1 to December 31, 1884, amounted to

For construction, ... $4,337 97

Charged as follows:

Materials	$745 52
Clerks' salaries	75 00
Testing cement	39 87
Additional catch-basins	131 95
Sewer in Cypress street, from Camp to North Main	944 29
Sewer in Friendship street, from Pearl to Stewart	80
Sewer in Sheldon street, from Hope to Brook	1,390 91
Sewer in Wilson street, from terminus of present sewer to Fuller	948 63
Contract reservations on completed sewers	61 00
	$4,337 97

For maintenance, ... $4,617 65

Charged as follows:

Cleaning basins and sewers	$3,224 36
Repairing basins and sewers	90 89
Cleaning and repairing old drains	142 70
Barn expenses	496 05
Salaries: superintendent and clerks	350 00
Inspection of connections	166 66
Horses, wagons, carts, harnesses, etc	65 30
Sundries	39 02
Tools	37 17
Telephone lines	5 50
	$4,617 65

The *net* expenditures for construction of sewers to December 31, 1884, inclusive, was $1,652,025 87

The *net* expenditures for maintenance of sewers to December 31, 1884, inclusive, was 178,136 50

Bills deposited with the City Treasurer for collection, from October 1 to December 31, 1884, inclusive, amounted to $200 93

As follows:

Cleaning private drains, etc	$149 35
Filling cisterns	14 00
Private drains laid in streets	24 38
Sewer material	13 20
	$200 93

During the quarter, coupons from bills collected have been returned by the City Treasurer and receipted for, amounting to $325 30

As follows:

Cleaning private drains, etc.....	$205 75
Filling cisterns.....	26 00
Sewer material....	67 67
Private drains laid to curb.....	24 38
Stone from sewer in Friendship street.....	1 50
	$325 30

CHAS. E. CARPENTER, } *Board of*
CLINTON D. SELLEW, } *Public Works.*

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NINTH QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING MARCH 31, 1889.

PROVIDENCE:
[illegible] PRESS COMPANY, CITY PRINTERS.
1889.

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REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., April 1, 1885.

TO THE HONORABLE CITY COUNCIL:

In compliance with the requirements of Chapter 207, of the ordinances, approved February 14, 1883, the Board of Public Works respectfully presents its ninth quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, and the condition and cost of same for the quarter ending March 31, 1885.

The city council having re-elected Charles E. Carpenter to membership in the Board for two years from the first Monday in March, 1885, he, on that day, took the oath of office. The Board was then re-organized by the choice of Charles E. Carpenter as President, and Clinton D. Sellew as Secretary.

HIGHWAYS.

The mildness of the early part of last winter permitted building and repairing streets well into December. On the suspension of work the number of laborers was materially reduced. The retained laborers were mainly put to the screening of gravel at the pits of Hawkins and Ridge streets, and to the accumulation of broken stone at the city yard, that there might be no lack of material on the coming of spring.

By the first of February so much of the appropriation for highways had been drawn out that the Board was led to question the economy of piling up screened gravel during winter, rather than to screen and cart the same once for all in summer, to the streets building or repairing, although for the time being a much larger force would be required.

In view, however, of the great depression in business, whereby laborers, if discharged, could get little or no employment, it was decided that the men had better be kept in work at reduced compensation, and still the ends of economy be met. Wages were therefore cut down February 16th, about seventeen per cent on the average — not a great reduction when it is considered what had previously been paid, and the low cost of nearly every necessary of life.

Acting further in the interests of economy, as well as of humanity, the Board began to clear obstructions from the line of Clinton street extension, and having purchased earth close at hand, put quite a large gang of laborers to the work of removing it with barrows into the deep valley which the said street must cross. The compensation of these laborers was ten cents per hour, nine hours until March 23, constituting a days work.

The resignation of Jesse E. Gray as superintendent in highway department, which took effect March 10, and the appointment of Samuel L. Blaisdell to the vacancy, were subjects of a special communication to the city council March 30.

January 27, 1885, the offer of John McCabe to cover complete the boiler and steam pipes leading from boiler to the engine at the stone crusher building, city yard, with McCabe's steam pipe covering, was accepted. Amount; $45.00.

March 12th, the offer of Nelson Titus to raise a wooden building on Clinton street, made necessary by reason of work ordered by the Board of Aldermen, was accepted, and

also an offer of John W. Briggs to do the mason work required to put under said building a proper underpinning. Amount, $210.00.

During the quarter a statement of the cost for concreting sidewalks on Dover and Hewes streets, with ten per cent. in addition thereto to cover the interest, cost of assessing and collecting, was certified to the Assessors of Taxes. Amount, $452.68.

Statements have been prepared of the cost of curbing set, ascertained by the Board and certified to the Board of Aldermen for approval, as follows, viz:

Adelaide avenue, from Broad street to Niagara	$827 87
Asia street, from Vinton to Knight	534 62
Branch avenue, from Slocum street to the bridge	623 96
Clinton street, from Broad to Prairie avenue	906 87
Constitution street, from Lester to Wilson	539 40
D street, from Lester to Booth	450 29
Dean street, from High to Fountain	305 97
Holden street, from Beach to Smith	888 75
Lester street, from Gilmore to Harrison	368 65
Manning street, from Governor to Gano	1,029 76
Mawney street, from Greenwich to Updike	1,084 88
North Main street and Pawtucket avenue, from Sexton to Cemetery street	2,531 43
Pearl street, north side, from Cranston to Broad, and south side, from Cranston to Central	752 59
Pike street, from South Main to Benefit	197 86
Polk street, from Pettis to Hedley	469 36
Providence street, from Dudley to Pearl	1,061 23
Somerset street, from Friendship to Providence	493 14
Taber avenue, from Angell street to a point 100 feet north of Humboldt avenue	768 06
Transit street, from Governor to Ives	535 89
Vinton street, from Broadway to Carpenter	189 61
Willard street, from Plain to Eddy	759 94
Total	$15,320 13

Five permits were issued to open streets.

During the quarter ending March 31, 1885, the following work was completed, viz.:

To Take Possession of.

Date of Order.

April 10, 1884, *Ashburton street to Charles.*

The following work was, March 31, 1885, in progress as follows, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of Order.

Sept. 20, 1883, *Moore street, from Broad to Updike:* Finished except concreting gutters.

Oct 18, " *Arnold street, from East to Governor:* Finished except rolling roadway.

" " " *Warren street, from Fuller to Dexter:* Finished except concreting gutters.

Nov. 15, " *Cromwell street, from Greenwich to Dexter:* Partially graded.

To be Brought to Grade.

Dec. 27, 1883, *Highway, adjacent to estate of Wanton Durfee and Humphrey Almy, on Dyer and Custom House streets:* Brought to grade except the portion in front of Humphrey Almy estate, which has been delayed to avoid legal and other difficulties.

Obstructions to be Removed.

Oct. 4, 1883, *Branch avenue, from Smithfield avenue to Douglas avenue:* Obstructions in the way of grading the avenue have been removed so as to make it passable. The line of occupation, in places, encroaches upon the avenue as laid out.

Concrete Sidewalks.

Date of Order.

Aug. 3, 1882, *Julian and Capron streets, adjoining Julian street school house estate:* Portion in Julian street finished.

To be Filled.

July 17, 1884, *Pond opposite works of the Nicholson File Company:* A small portion of the pond has been filled.

Sidewalk to be Concreted and Driveways put in.

No. of Resolution. Date of Approval.

549. Dec. 5, 1884, *Burnside and Public streets, in front of new ward room and fire station:* The driveways have been put in.

To Take Possession of.

Date of Order.

Dec. 18, 1884, *Clinton street, from present termination to Plain street:* Obstructions have been removed except two buildings, and street partially brought to grade.

The following work ordered by the Board of Aldermen and City Council had not been commenced March 31, 1885, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of Order.

Aug. 3, 1882, *Capron street, in front of Julian street school-house estate.*

Oct. 19, " *Potter's avenue, from Broad street to Greenwich.*

Date of Order.	
Nov. 16, 1882.	*Eddy street, from Thurber's avenue to Pavilion avenue.*
Dec. 21, "	*Clinton street, from Prairie avenue to Gay street.*
May 7, 1883,	*Reservoir avenue, east side, from Greenwich street to the railroad bridge.*
July 19, "	*Chalkstone avenue, from Charles street to Black.*
" " "	*Cypress street, from North Main to Camp.*
Sept. 20, "	*Elmwood avenue, west side, from Atlantic street to Adelaide avenue.*
" " "	*Greenwich street and Elmwood avenue, east side, from Potter's avenue to Adelaide.*
Oct. 18, "	*Manning street, from Hope to Thayer.*
Nov. 15, "	*Pearl street, from Beacon to Plain.*
" " "	*Wellington street, from East Beacon to Pearl.*
Dec. 31, "	*Dexter street, from Cranston to Cromwell.*
May 15, 1884,	*Fremont street from Governor to Ives.*
June 19, "	*Carter street, from Greenwich to the railroad.*
" 26, "	*Diman place, from Angell street to Asylum wall.*
" " "	*Richmond street, from Ship to Point.*
" " "	*Stimson avenue, from Hope street to Angell.*
Sept. 11, "	*Doyle avenue, from East avenue to Olney street.*
" 18, "	*George street, from Ives to Gano.*
" " "	*Miller street, from Division to Dexter.*
Oct. 16, "	*Burnett street, from Greenwich to Public.*
" " "	*Daboll street, from Greenwich to Updike.*
" " "	*Greenwich street, from Earl to Carter.*
" " "	*Grove street, from Almy to Tobey.*
" " "	*Webster street, from Delhi to Ambrose.*
March 19, 1885,	*Blackstone street, south side, from Plain to Eddy.*

Curbstones to be Re-set and Gutters Re-paved.

July 17, 1884, *Waterman street, from Brown to Brook.*

Pave with Granite Blocks.

No. of Resolution. Date of Approval.

332. July 5, 1884, *Richmond street, from Ship to Point.*

85. Mar. 6, 1885, *Market square and College street, portions of.*

Abate Nuisance on.

218. May 20, 1882, *Mitchell street, caused by overflow of surface water.*

To be Repaired.

Date of Order.

Nov. 15, 1883, *Gangway on the northerly side of Fire Station, between Mill and*
and
May 5, 1884, *North Main streets, and also the steps known as "Thurber's steps."*

To be Brought to Grade.

June 19, 1884, *Benefit street, from south line of the estate of the First Congregational Society to Benevolent street.*

No. of Resolution. Date of Approval.

517. Oct. 28, 1884, *Bucklin street, from Carter to Earl.*

Granite Wall to be Built.

Date of Order.

Oct. 16, 1884, *Jackson avenue, at estate of Daniel and Mary Sullivan.*

Boundstone to be Removed.

No. of Resolution.	Date of Approval.	
54.	Feb. 3, 1885,	*Granite bound on Pawtucket avenue, between Pawtucket and Providence.*

Bills approved on account of Highways from January 1 to March 31, 1885, inclusive, amounted to $37,522.34.

Classified as follows:

Cleaning streets	$1,157 53	
Repairs on unpaved streets	657 95	
Repairs on paved streets	48 51	
Crushed stone, materials and labor	11,178 46	
Screening gravel	9,702 94	
Stone, paving and crosswalk	2,157 54	
Barn expenses	1,617 00	
Horses, wagons, carts, harnesses, etc	1,422 04	
Salaries—superintendent, clerks and inspectors	1,241 01	
Cleaning streets from ice and snow	1,185 68	
Blacksmith and wheelwright shop	1,184 91	
Labor on materials	654 38	
Repairs on stone crushers	549 45	
Tools, implements, etc	470 14	
Steam rollers, repairs and supplies	430 89	
Harness shop, materials and labor	348 04	
Sundries	192 61	
Watchman at city yard	167 60	
Fencing streets, materials and labor	50 51	
Office expenses, city yard	18 42	
Telephone lines	5 22	
		$34,440 83

New Work—Building and Re-building Streets.

Sidewalks Curbed and Gutters Paved.

Adelaide avenue, from Broad street to Niagara	$9 00	
Arnold, from East to Governor	200 90	
Asia, from Vinton to Knight	10 80	
Burnside, adjoining ward room and fire station	2 40	
Clinton, from Broad to Prairie avenue	9 00	
Constitution, from Lester to Wilson	13 50	
Amounts carried forward	$245 60	$34,440 83

Amounts brought forward	$245 60	$34,440 83
Cromwell, from Greenwich to Dexter	222 43	
Holden, from Beach to Smith	7 20	
Lester, north side, from Gilmore to Harrison	6 84	
Lester, south side, from Gilmore to Harrison	6 66	
Mawney, from Greenwich to Updike	18 00	
Moore, from Broad to Updike	1 80	
Polk, from Pettis to Hedley	7 20	
Providence, from Dudley to Pearl	18 00	
Somerset, from Friendship to West Clifford	3 60	
Somerset, from West Clifford to Providence	3 60	
Taber avenue, from Angell street to near Humboldt avenue	310 39	
Transit, from Governor to Ives	7 20	
Vinton, from Broadway to Carpenter	7 40	
Warren, from Fuller to Dexter	3 62	
Worked to Grade.		
North Main, from Sexton to Cemetery	89 86	
Drain or Gutter for Surface Water.		
Broad and Cambridge streets, to land of Gustave Bender	2 60	
Pave with Granite Blocks.		
Point and Friendship streets	20 85	
Take Possession of.		
Ashburton street to Charles	50 40	
Clinton street, from present termination to Plain street	2,048 26	
		$3,081 51
		$37,522 34

Bills deposited with the City Treasurer for collection, from January 1 to March 31, 1885, inclusive, amounted to $1,819.45.

As follows:

Labor and materials	$438 84
Street sweepings	1,183 43
Horses	90 00
Manure from barn	78 75
Chopping blocks	15 25
Tools	13 18
	$1,819 45

During the quarter, coupons from bills collected have been returned by the City Treasurer and receipted for, amounting to $1,662.25.

As follows:

Labor and materials	$445 73
Street sweepings	1,097 09
Horses	90 00
Tools	22 18
Chopping blocks	7 25
	$1,662 25

Bills approved on account of sidewalks and curbing, from January 1 to March 31, 1885, inclusive, amounted to $5,129.01.

Sidewalks and curbing bills deposited with the City Treasurer for collection, from January 1 to March 31, 1885, inclusive, amounted to $16,112.17.

During the quarter, coupons from sidewalks and curbing bills collected have been returned by the City Treasurer and receipted for, amounting to $380.98.

WATER WORKS.

January 28, 1885, the offer of L. Waterbury & Co. to furnish 700 lbs. jute bands was accepted. Amount, $31.50.

January 28th, the offer of the Boston Machine Manufacturing Co. to furnish ten four-inch, seventy-five six-inch,

and ten eight-inch water gates delivered in this city was accepted. Amount, $1,968.00.

January 29th, the offer of the Fales & Jenks Machine Co. to furnish, delivered in this city, ten fire hydrants, twenty-eight fire hydrant boxes complete, twenty fire hydrant box covers and ten sprinkling hydrant box covers was accepted. Amount, $2,040.00.

February 10th, the proposal of the Warren Foundry and Machine Co., of Phillipsburg, N. J., to furnish five hundred tons of 2,240 pounds of six-inch and three hundred tons of eight-inch cast iron water pipes was accepted. A contract has since been executed with said company for furnishing these pipes which will amount to $23,040.00.

February 24th, the offers of Thos. Phillips & Co. and L. H. Tillinghast & Co. to furnish each five tons lead pipe of various sizes were accepted. Amount, $920.00.

March 14th, the offer of the Fuller Iron Works to furnish certain special castings and service boxes was accepted.

The work of laying the following water pipes, completing the list ordered by the City Council, had not been commenced March 31, 1885, viz.:

No. of Resolution.	Date of Approval.	
526.	Nov. 8, 1884,	*Pawtucket avenue, Seventh street and Highland avenue.*
20.	Jan. 8, 1884,	*Joslin street, from present end of pipe southerly to connect with pipes in Amherst street.*
21.	" " "	*Rocky Hill avenue, Johnston, from present end of pipe to Laban street, and in Laban street about 120 feet easterly.*
22.	" " "	*Waterman street, Johnston, from Rocky Hill avenue easterly about 132 feet.*

Two post fire hydrants were set during the last quarter, one each in the following locations:

Corry avenue, southeast corner of Blood avenue, Cranston.
Corry avenue, southeast corner of Dyer avenue, Cranston.

The total number of fire hydrants is now twelve hundred and twenty-six, twelve hundred and sixteen flush and ten post hydrants.

Statement of sizes and lengths of pipes laid since the commencement of the work:

36-inch	10,084	feet.
30-inch	59,637	feet.
24-inch	23,942	feet.
20-inch	6,854.8	feet.
16-inch	31,574	feet.
12-inch	55,189.8	feet.
10-inch	14,758.1	feet.
8-inch	136,151.95	feet.
6-inch	632,476.07	feet.
Total	970,667.72	feet.

or, 183.8386 miles.

The average daily consumption of water during the last quarter was 4,669,000 gallons.

During the quarter ending March 31, 1885, one hundred and sixty water meters were set, of which number fifteen were to replace condemned meters. The following meters were in use at the close of the quarter:

KIND.	SIZES.							Total.
	⅝ in.	¾ in.	1 in.	1½ in.	2 in.	3 in.	4 in.	
Ball & Fitts, Piston	2,865	548	128	47	7	1	.....	3,596
Ball & Fitts, Rotary	1	.....	22	27	3	7	3	63
Crown	1,754	310	94	29	11	3	3	2,204
Fales, Jenks & Sons	156	131	9	1	2	.....	1	300
Worthington	136	1	.....	.....	1	.....	1	139
	4,912	990	253	104	24	11	8	6,302

Fifty-nine plumbers' licenses were issued during the quarter, all of which expire December 31, 1885.

Five hundred and ninety-six permits to do plumbing work were issued during the quarter.

Twenty-two applications for water were made during the quarter, making the total number March 31, 1885, twelve thousand eight hundred and forty.

The number of new service stops opened during the quarter was thirty-three.

The total number of service stops opened to March 31, 1885, inclusive, was twelve thousand one hundred and seventy-five. The number in actual use March 31, 1885, was eleven thousand four hundred and thirty-nine.

The amount of bills approved on account of water works, from January 1 to March 31, 1885, inclusive, was

For construction and extension, . . $5,508 23

Classified as follows:

Prevention of defilement of the Pawtuxet	$2,500 80	
Rent of wharf and pipe yard	625 00	
Taps and stops	504 02	
Service pipe	459 13	
Laying water pipes	415 94	
Barn expenses	312 45	
Horse and wagon account	268 32	
Laying service pipes	226 25	
Wharf salaries	150 00	
Labor on and carting pipes	24 40	
Special castings	18 02	
Stop valves	2 55	
Tools	1 35	
	$5,508 23	

For maintenance, ... $14,754 78

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$2,302 57	
Sundries	668 34	
Engineers	600 00	
Firemen	419 35	
Superintendence	249 99	
Lights	239 91	
Labor on fuel	213 60	
Corliss pumping engine and house	75 37	
Oil, waste and packing	74 64	
Real estate	39 04	
Barn expenses	18 88	
Care of grounds	13 65	
Worthington pumping engine	40	
		$4,915 74

SOCKANOSSET RESERVOIR.

Watchman	$135 00	
Care of reservoir and grounds, gate houses, etc.	22 90	
		$157 90
Amount carried forward		$5,073 64

Amount brought forward		$5,073 64

Hope Pumping Station.

Engineers	$800 01	
Firemen	360 00	
Lights	161 37	
Hope engine house	49 89	
Sundries	41 89	
Oil, waste and packing	2 23	
Pumping engine No. 1, (Corliss)	1 37	
		$1,416 76

Hope Reservoir.

Watchman	$202 50	
Sundries	30	
		$202 80

Pipe Line and Service Stops.

Repairs	$1,630 72	
Superintendence, salaries	600 00	
		$2,230 72

Meter Department.

Water meters	$1,946 64	
Setting and repairing meters	1,165 70	
		$3,112 34

Miscellaneous.

Clerks and inspectors' salaries	$1,974 99	
Superintendent's clerks	300 00	
Analyses of water	94 50	
Real estate at Pawtuxet	79 00	
Sundries	68 75	
Barn expenses	62 70	
Horse hire	62 49	
Horse and wagon account	30 44	
Telephone lines	16 42	
Public drinking fountains and troughs	16 39	
Pipe yard office expenses	12 84	
		$2,718 52
		$14,754 78

The amount of expenditures from January 1 to March 31, 1885, inclusive, was	$20,263 01
The total expenditure to March 31, 1885, inclusive, was	6,124,963 20
The *net* expenditure for construction and extension, from January 1 to March 31, 1885, inclusive, was	5,303 94
The *net* expenditure for construction and extension to March 31, 1885, inclusive, was	4,991,833 38
The *net* expenditure for maintenance, from January 1 to March 31, 1885, inclusive, was	12,006 47
The *net* expenditure for maintenance to March 31, 1885, inclusive, was	652,491 96

Bills deposited with the City Treasurer for collection, from January 1 to March 31, 1885, inclusive, amounted to $231,956 79

As follows:

Water	$227,910 84
Water meters	2,615 70
Setting and repairing meters	936 01
Rent of real estate	240 52
Penalties	50 00
Permanently closing service stops	25 00
Labor and materials, laying service pipes	118 02
Cast-iron water pipe	37 46
Old rope	17 24
Manure from pipe-yard barn	6 00
	$231,956 79

During the quarter, coupons from bills collected have been returned by the City Treasurer and receipted for, amounting to . . $216,574 26

As follows:

Water	$213,583 66
Water meters	2,201 10
Setting and repairing meters	433 78
Rent of real estate	88 43
Penalties	38 00
Permanently closing service stops	25 00
Amount carried forward	$216,369 97

Amount brought forward	$216,369 97
Labor and materials, laying service pipe	104 34
Cast-iron water pipe	33 65
Stop-valves	32 00
Old rope	17 24
Special castings	11 06
Manure from pipe-yard barn	6 00
	$216,574 26

SEWERS.

March 24, 1885, the proposal of the Nayatt Brick Company to furnish, delivered in this city, seven hundred and fifty feet of 15-inch sewer pipes, ninety feet of 15-inch by 12-inch branches, one hundred and twenty feet of 15-inch by 6-inch branches, six thousand feet of 12-inch sewer pipes, ten hundred and fifty feet of 12-inch by 6-inch branches, four hundred feet of 8-inch sewer pipe, one hundred pieces 6-inch by 6-inch by 6-inch double branches, thirty 15-inch bevel connections, sixty 12-inch bevel connections, four hundred long 6-inch connections, two thousand 6-inch covers, thirteen hundred 8-inch invert blocks and two hundred and fifty thousand hard body bricks, was accepted, and on the 26th of the same month their proposal to furnish one hundred flag-stones for catch-basins was also accepted. A contract has since been executed with said company for furnishing the above-named materials, the total amount of which is $8,356.25.

March 24th, the proposal of Garvey Brothers to furnish fifty-eight sets of catch-basin stones and twenty-two coping stones was accepted, and a contract has since been executed with them. Amount, $1,802.00.

Assessments for the cost of constructing sewers in the following named streets have been completed and certified to the City Treasurer, viz.:

Sheldon street, from Brook to Hope.....	$1,736 30
Wilson street, from "present sewer" to Fuller..	1,693 80
Nichols street, from Walling to Nash lane.....	2,626 47
Stimson avenue, from Angell street to Hope....	3,666 06
Cypress street, from Camp to North Main.....	4,043 03
Nash lane, from Nichols st. to Nash lane bridge.	179 82
Beach street, from summit to Holden.....	685 04
Total.....	$14,630 52

Sixteen drain layers' licenses were issued during the quarter, all of which expire December 31, 1885.

During the quarter, twenty-nine permits were issued to drain layers; six for new work and twenty-three for extension and repair of drains.

Work upon the following sewers, completing the list ordered by the City Council, had not commenced March 31, 1885, viz.:

No. of Resolution.	Date of Approval.	
397.	Oct. 7, 1882,	*Orms street, from Carroll to present end of sewer in Orms.*
408.	Sept. 8, 1884,	*Webster and Ashburton streets, from Delhi to Martin.*
601.	Jan. 2, 1885,	*Oriental and Oregon streets, from Admiral street to Borva street, thence across land of the Providence and Worcester Railroad Co. to Ashburton street.*
609.	" " "	*Lockwood and Plain streets, from Broad street to Dudley street.*
90.	Mar. 12, "	*America street, from Africa to Atwell's avenue.*
91.	" " "	*Greenwich street, from Wilson to Warren.*

Bills approved on account of sewers from January 1 to March 31, 1885, inclusive, amounted to

For construction, ... $3,079 66

Charged as follows:

Materials	$2,356 85
Clerks' salaries	75 00
Tools	11 44
Testing cement	9 13
Sewer in Beach street, from summit in said street to Holden street	492 24
Contract reservation on completed sewers	135 00
	$3,079 66

For maintenance, ... $3,896 37

Charged as follows:

Cleaning basins and sewers	$2,223 78
Cleaning and repairing old drains	43 53
Repairing basins and sewers	5 49
Salaries—superintendent and clerks	525 00
Horses, wagons, carts, harnesses, etc	432 53
Barn expenses	342 85
Inspection of connections	249 99
Tools	68 30
Sundries	4 90
	$3,896 37

The *net* expenditure for construction of sewers to March 31, 1885, inclusive, was $1,654,842 58

The *net* expenditure for maintenance of sewers to March 31, 1885, inclusive, was 182,072 72

Bills deposited with the City Treasurer for collection, from January 1 to March 31, 1885, inclusive, amounted to $174 32

As follows:

Cleaning private drains, etc	$85 56
Horse	60 00
Filling cisterns	6 00
Private drains laid in streets	12 32
Sewer material	10 44
	$174 32

During the quarter, coupons from bills collected have been returned by the City Treasurer and receipted for, amounting to $128 51

As follows:

Cleaning private drains, etc	$43 75
Horse	60 00
Filling cistern	2 00
Private drain laid to curb	12 32
Sewer material	10 44
	$128 51

CHAS. E. CARPENTER, } *Board of*
CLINTON D. SELLEW, } *Public Works.*

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ASTOR, LENOX AND
TILDEN FOUNDATIONS.

TENTH QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING JUNE 30, 1885.

PROVIDENCE:
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ASTOR, LENOX AND
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REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., July 1, 1885.

TO THE HONORABLE CITY COUNCIL:

In compliance with the requirements of Chapter 207, of the ordinances, approved February 14, 1883, the Board of Public Works respectfully presents its tenth quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, and the condition and cost of same for the quarter ending June 30, 1885.

HIGHWAYS.

A contract dated April 4, 1885, was executed with E. D. Smith & Sons, to lay the concrete of sidewalks and gutters required for the season of 1885.

May 6th, the offer of F. H. Peabody & Son to re-build "Thurber's steps," including iron hand-rails, for the sum of one hundred and sixty (160) dollars, was accepted.

May 9th, the offer of the Rhode Island Concrete Co. to cover about 680 square yards of paving on Smith street with asphaltic top dressing was accepted. Amount, $484.91.

May 14th, the offer of Duncan McGregor to cover the boiler and steam pipes leading from boiler to the engine in the stone crusher building, city yard, with asbestos composition, was accepted. Amount, $88.00.

John McCabe, whose offer had been previously accepted to do this work, was not to be found when the department was ready to have the job done.

Fourteen permits were issued to open streets.

During the last quarter portions of the following streets have been repaired:

Back street,	India street,
Broad street,	Jackson street,
Brook street,	Knight street,
Camp street,	Meeting street,
Dyer street,	Mill street,
Dorrance street,	North Main street,
Eddy street,	Pine street,
East avenue,	Pike street,
East street,	Potter's avenue,
Franklin street,	Prairie avenue,
Federal street,	Promenade street,
George street,	Smith street,
Governor street,	South Main street,
Green street,	South Water street,
Hay street,	Union street.
Hospital street,	

During the quarter ending June 30, 1885, the following work was completed, viz.:

SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.	
July 19, 1883,	*Cypress street, from North Main to Camp.*
Sept. 20, "	*Moore street, from Broad to Updike.*
Oct. 18, "	*Arnold street, from East to Governor.*
" " "	*Warren street, from Fuller to Dexter.*
Nov. 15, "	*Cromwell street, from Greenwich to Dexter.*
" " "	*Pearl street, from Beacon to Plain.*

TO BE REPAIRED.

Date of order.	
Nov. 15, 1883, and May 5, 1884,	*Gangway on the northerly side of Fire Station, between Mill and North Main streets, and also the steps known as "Thurber's steps."*

BOUNDSTONE TO BE REMOVED.

No. of Resolution.	Date of Approval.	
54.	Feb. 3, 1885,	*Granite bound on Pawtucket avenue, between Pawtucket and Providence.*

SIDEWALKS TO BE CONCRETED AND DRIVEWAYS PUT IN.

No. of Resolution.	Date of Approval.	
549	Dec. 5, 1884,	*Burnside and Public streets, in front of new ward room and fire station.*

The following work was, June 30, 1885, in progress, viz.:

SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.	
Sept. 20, 1883,	*Greenwich street and Elmwood avenue, east side, from Potter's avenue to Adelaide.*
Oct. 18, "	*Manning street, from Hope to Thayer.*
May 15, 1884,	*Fremont street, from Governor to Ives.*

TO BE BROUGHT TO GRADE.

Dec. 27, 1883, *Highway, adjacent to estate of Wanton Durfee and Humphrey Almy, on Dyer and Custom House streets:* Brought to grade except the portion in front of Humphrey Almy estate, which has been delayed to avoid legal and other difficulties.

OBSTRUCTIONS TO BE REMOVED.

Oct. 4, 1883, *Branch avenue, from Smithfield avenue to Douglas avenue:* Obstructions in the way of grading the avenue have been removed so as to make it passable. The line of occupation, in places, encroaches upon the avenue as laid out.

Curbing to be Re-Set and Gutters Paved.

No. of Resolution. Date of Approval.

151. April 20, 1885, *Tockwotton street, north side, from Ives to Gano.*

To be put in Condition Safe and Convenient for Public Travel.

Date of order.

April 16, 1885, *Fenner avenue, from Cranston street to Reservoir avenue.*

Concrete Sidewalks.

Date of order.

Aug. 3, 1882, *Julian and Capron streets, adjoining Julian street school house estate:* Portion in Julian street finished.

To be Filled.

July 17, 1884, *Pond opposite works of the Nicholson File Company:* A small portion of the pond has been filled.

To take Possession of.

Dec. 18, 1884, *Clinton street, from present termination to Plain street:* Obstructions have been removed and street partially brought to grade.

The following work ordered by the Board of Aldermen and City Council had not been commenced June 30, 1885, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of order.

Aug. 3, 1882, *Capron street, in front of Julian street school house estate.*

Oct. 19,	1882,	*Potter's avenue, from Broad Street to Greenwich.*
Nov. 16,	"	*Eddy street, from Thurber's avenue to Pavilion avenue.*
Dec. 21,	"	*Clinton street, from Prairie avenue to Gay street.*
May 7,	1883,	*Reservoir Avenue, east side, from Greenwich street to the railroad bridge.*
July 19,	"	*Chalkstone avenue, from Charles street to Black.*
Sept. 20,	"	*Elmwood avenue, west side, from Atlantic street to Adelaide avenue.*
Nov. 15,	"	*Wellington street, from East Beacon to Pearl.*
Dec. 31,	"	*Dexter street, from Cranston to Cromwell.*
June 19,	1884,	*Carter street, from Greenwich to the railroad.*
" 26,	"	*Diman place, from Angell street to Asylum wall.*
" "	"	*Richmond street, from Ship to Point.*
" "	"	*Stimson avenue, from Hope street to Angell.*
Sept. 11,	"	*Doyle avenue, from East avenue to Olney street.*
" 18,	"	*George street, from Ives to Gano.*
" "	"	*Miller street, from Division to Dexter.*
Oct. 16,	"	*Burnett street, from Greenwich to Public.*
" "	"	*Daboll street, from Greenwich to Updike.*
" "	"	*Greenwich street, from Earl to Carter.*
" "	"	*Grove street, from Almy to Tobey.*
" "	"	*Webster street, from Delhi to Ambrose.*
March 19,	1885,	*Blackstone street, south side, from Plain to Eddy.*
April 16,	"	*Burnside street, from Public to Potter's avenue.*
" "	"	*Peace street, from Broad to Prairie avenue.*
" "	"	*Woodland street, from Park to Holden.*
May 21,	"	*Adelaide avenue, north side, from Elmwood avenue to Melrose street.*

May 21, 1885, *Chalkstone avenue, from Douglas to Smith street.*
" " " *Clinton street, from Gay to Plain.*
" " " *Cushing street, from Prospect to Brook.*
" " " *Davis street, west side, from Common to Orms.*
June 4, " *Beacon street, from Lockwood to Pearl.*
" " " *Creighton street, from Prospect to Brown.*
" " " *Dorrance, Pine and Eddy streets, adjoining estate of Freemasons' Hall Co.*
" 18, " *Blackstone street, north side, from Eddy to Culver.*
" " " *Bond street, from Atwell's avenue to Federal street.*
" " " *George street, from Governor to Ives.*
" " " *Pekin street, from Chalkstone avenue to Bailey street.*
" " " *Public street, from Broad to Greenwich.*

Curbstones to be Re-set and Gutters Re-paved.

July 17, 1884, *Waterman street, from Brown to Brook.*

Paved with Granite Blocks.

No. of Resolution.	Date of Approval.	
332.	July 5, 1884,	*Richmond street, from Ship to Point.*
85.	Mar. 6, 1885,	*Market square and College street, portions of.*

Abate Nuisance on.

218. May 20, 1882, *Mitchell street, caused by overflow of surface water.*

To be Brought to Grade.

June 19, 1884, *Benefit street, from south line of the estate of the First Congregational Society to Benevolent street.*

No. of Resolution. Date of Approval.

517. Oct. 28, 1884, *Bucklin street, from Carter to Earl.*

Date of order.

May 21, 1885, *Westfield street, from a point about 100 feet west of Fuller to Harrison.*

June 18, 1885, *Austin street, from Potter's avenue to Public street.*

" " " *Hamilton street, from Potter's avenue to Adelaide avenue.*

To be Repaired.

Date of order.

June 4, 1885, *Peck and Friendship streets, in the immediate vicinity of the estate of Charles D. W. and Henrietta M. K. Brownell.*

" " " *Friendship and Eddy streets in the immediate vicinity of the estate of Michael Fitzgerald.*

" 14, " *Dorrance, Pine and Eddy streets, in the immediate vicinity of the estate of the Freemasons' Hall Co.*

To Take Possession of.

Date of order.

April 16, 1885, *Earl's lane (now Pleasant street), from North Main to Camp street.*

" " " *Gordon avenue, from Public to Colfax street.*

Curbing to be Set, Gutters Paved and Sidewalks Concreted.

Date of order.

June 18, 1885, *Corner of Atwell's avenue and America street, adjoining the lot occupied by new fire station and evening school.*

Surface Drain to be Put In.

No. of Resolution. Date of Approval.

280. June 23, 1885, *At the corner of Cranston and Dexter streets.*

Granite Wall to be Built.

Date of order.

Oct. 16, 1884, *Jackson avenue, at estate of Daniel and Mary Sullivan.* Order rescinded May 21, 1885.

Bills approved on account of highways from April 1 to June 30, 1885, inclusive, amounted to $61,597.95.

Classified as follows:

Cleaning streets	$8,413 86	
Repairs on unpaved streets	14,324 43	
Repairs on paved streets	2,441 81	
Crushed stone, material and labor	9 956 70	
Screening gravel	2,989 45	
Barn expenses	2,065 96	
Salaries—superintendent, clerks and inspectors	1,535 46	
Repairs on stone crushers	1,424 86	
Blacksmith and wheelwright shop	1,407 51	
Tools, implements, etc	1,051 82	
Horses, wagons, carts, harnesses, etc	585 48	
Labor on materials	473 87	
Harness shop, material and labor	432 03	
Stone, paving and crosswalk	383 72	
Steam rollers, repairs and supplies	361 38	
Watchman at city yard	196 00	
Removing ice and snow from streets	99 14	
Sundries	35 20	
Office expenses, city yard	21 81	
Telephone lines	9 43	
		$48,209 92

New Work—Building and Re-building Streets.

Sidewalks Curbed and Gutters Paved.

Cromwell, from Greenwich to Dexter	$1,117 46	
Cypress, from North Main to Camp	2,884 41	
Amounts carried forward	$4,001 87	$48,209 92

Amounts brought forward	$4,001 87	$48,209 92
Fremont, from Governor to Ives	14 66	
Greenwich street and Elmwood avenue	768 92	
Manning, from Hope to Thayer	1,110 58	
Moore, from Broad to Updike	216 70	
Pearl, from Beacon to Plain	1,719 35	
Tockwotton, north side, Ives to Gano	1,852 40	
Warren, from Fuller to Dexter	20 84	
TAKE POSSESSION OF.		
Clinton street, from present termination to Plain street	2,445 88	
PUT IN CONDITION SAFE FOR PUBLIC TRAVEL.		
Fenner avenue, from Cranston street to Reservoir avenue	868 45	
GRADE AND TURNPIKE ROADWAY.		
Westfield street, from near Fuller to Harrison	129 38	
TO BE REPAIRED.		
Gangway, on northerly side of fire station, between Mill and North Main streets, known as "Thurber's Steps,"	239 00	
		13,388 03
		$61,597 95

Bills deposited with the City Treasurer for collection, from April 1 to June 30, 1885, inclusive, amounted to $356.45.

As follows:

Labor and materials	$31 36
Street sweepings	204 46
Manure from barn	80 63
Rent of pasture on Smith street	20 00
Chopping blocks	11 00
Old wheels	9 00
	$356 45

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to $416.34.

Labor and materials	$147 42
Street sweepings	151 17
Manure from barn	78 75
Rent of pasture on Smith street	20 00
Chopping blocks	19 00
	$416 34

Bills approved on account of sidewalks and curbing, from April 1 to June 30, 1885, inclusive, amounted to $4,415.47.

Sidewalks and curbing bills deposited with the City Treasurer for collection, from April 1 to June 30, 1885, inclusive, amounted to $2.52.

During the quarter coupons from sidewalks and curbing bills collected, have been returned by the City Treasurer, and receipted for, amounting to $6,804.41.

WATER WORKS.

April 25th, the offer of Hopkins, Pomroy & Co. to do the teaming required by the water and sewer departments during the season of 1885, for the sum of four dollars per day for double teams, and two dollars and fifty cents for single teams, was accepted.

During the quarter ending June 30, 1885, water pipes were laid as follows, viz.:

12-INCH.

In Charles street, Pawtucket and Fenner avenues, ... 1,661.6 feet.

8-INCH.

In Charles, Camp and North streets, . 1,807.1 feet.

6-INCH.

In Seventh, Joslin, Amherst, Chatham, Clinton, Staniford, Milk, Parsonage, Pem-

berton, Salisbury, Dover, Robinson, Slocum and Fourth streets; in Highland, Pavilion, Potter's, Mount Pleasant, Pomona and Chester avenues; in Diman Place; and in Rocky Hill avenue and Laban and Waterman streets, Johnston, ...	6,919.1 feet.
Total, ...	10,387.8 feet.

or 1.9673 miles.

Twenty-four feet of six-inch water pipes have been removed from Halton street on account of freezing.

Eight fire hydrants have been set during the last quarter, one in each of the following locations:

Fenner avenue, northeast corner of Burrington street.
Mount Pleasant avenue, east side, 263 feet north of Chalkstone avenue.
North street, northwest corner of East avenue.
North street, north side, 490 feet west of East avenue.
North street, north side, 271 feet east of Camp street.
Potter's avenue, northeast corner of Harriet street.
Seventh street, northwest corner of Highland avenue.
Slocum street, south side, 181 feet west of Almy street.

The total number of fire hydrants is now twelve hundred and thirty-four; twelve hundred and twenty-four flush and ten post hydrants.

The following work of laying pipes was commenced June 30, 1885:

No. of Resolution.	Date of Approval.	
240.	June 11, 1885,	*Manning street, from Thayer to Hope.*

The work of laying the following water pipes, completing the list ordered by the City Council, had not been commenced June 30, 1885, viz.:

No. of Resolution.	Date of Approval.	
270.	June 20, 1885,	*Elmwood avenue, Cranston, from Park avenue southerly about 1,600 feet.*
271.	" " "	*Gesler street, from present end of pipe westerly about 36 feet.*

Statement of sizes and lengths of pipes laid since the commencement of the work:

36-inch	10,084	feet.
30-inch	59,637	feet.
24-inch	23,942	feet.
20-inch	6,854.8	feet.
16-inch	31,574	feet.
12-inch	56,851.4	feet.
10-inch	14,758.1	feet.
8-inch	137,959.05	feet.
6-inch	639,371.17	feet.
Total	981,031.52	feet.

or, 185.8014 miles.

The average daily consumption of water during the last quarter was 4,637,563 gallons.

During the quarter ending June 30, 1885, one hundred and fifty-four water meters were set, of which number forty-eight were to replace condemned meters. The use of four meters was discontinued. The following meters were in use at the close of the quarter:

KIND.	SIZES.							Total.
	⅝ in.	¾ in	1 in.	1½ in.	2 in.	3 in.	4 in.	
Ball & Fitts, piston	2,863	549	128	47	7	1	.....	3,[illegible]
Ball & Fitts, rotary	1	.....	22	27	3	7	3	63
Crown	1,877	331	99	31	11	3	3	2,[illegible]
Fales, Jenks & Sons	134	114	8	1	2	.....	1	2[illegible]
Worthington	128	1	.....	.....	1	.....	1	131
	5,003	995	257	106	24	11	8	6,404

Three plumbers' licenses were issued during the quarter, making the total number sixty-two, all of which expire December 31, 1885.

Eight hundred and eighty-five permits to do plumbing work were issued during the quarter.

Two hundred and seventeen applications for water were made during the quarter, making the total number, June 30, 1885, thirteen thousand and fifty-seven.

The number of new service stops opened during the quarter was one hundred and ninety-one.

The total number of service stops opened to June 30, 1885, inclusive, was twelve thousand three hundred and sixty-six. The number in actual use June 30, 1885, was eleven thousand six hundred and eighty-nine.

The amount of bills approved on account of water works, from April 1 to June 30, 1885, inclusive, was

For construction and extension, . . $11,018 51

Classified as follows:

Laying water pipes	$2,267 95
Stop valves	1,968 00
Special castings	1,834 80
Fire hydrants, boxes and covers	1,400 00
Taps and stops	747 23
Laying service pipes	664 73
Prevention of defilement of the Pawtuxet	557 99
Service pipe	474 12
Barn expenses	402 92
Cast iron water pipes	385 74
Wharf salaries	150 00
Tools	86 30
Labor on and carting pipes	50 93
Horse and wagon account	27 80
	$11,018 51

For maintenance, ... $19,232 00

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$1,588 27	
Sundries	853 54	
Engineers	800 00	
Firemen	540 00	
Superintendence	333 32	
Oil, waste and packing	290 34	
Lights	194 04	
Corliss pumping engine and house	191 29	
Labor on fuel	58 65	
Real estate	48 53	
Care of grounds	39 75	
Barn expenses	36 12	
Horse and wagon account	28 00	
Worthington pumping engine	7 60	
Cornish pumping engine	5 40	
		$5,014 85

SOCKANOSSET RESERVOIR.

Watchman	$183 00	
Care of reservoir, grounds, gate house, etc.	33 71	
		$216 71

HOPE PUMPING STATION.

Engineers	$1,066 68	
Firemen	480 00	
Pumping engine No. 2, (Nagle)	154 31	
Lights	144 54	
Oil, waste and packing	81 20	
Sundries	30 41	
Engine house	10 59	
		$1,967 73

HOPE RESERVOIR.

Watchman	$274 50	
Care of reservoir, grounds, gate houses, etc.	584 50	
		$859 00

PIPE LINE AND SERVICE STOPS.

Repairs	$1,906 94	
Superintendence, salaries	800 00	
		$2,706 94
Amount carried forward		$10,765 23

Amount brought forward		$10,765 23

METER DEPARTMENT.

Water meters	$3,308 25	
Setting and repairing meters	1,486 77	
		$4,795 02

MISCELLANEOUS.

Clerks' and inspectors' salaries	$2,633 32	
Superintendent's clerks	400 00	
Telephone lines	309 10	
Sundries	88 71	
Horse hire	62 49	
Barn expenses	60 49	
Horse and wagon account	53 85	
Public drinking fountains and troughs	38 14	
Pipe yard, office expenses	20 00	
Analyses of water	5 65	
		$3,671 75
		$19,232 00

The amount of expenditures from April 1 to June 30, 1885, inclusive, was	$30,250 51
The total expenditures to June 30, 1885, inclusive, was	6,155,213 71
The *net* expenditure for construction and extension, from April 1 to June 30, 1885, inclusive, was	10,827 93
The *net* expenditure for construction and extension to June 30, 1885, inclusive, was	5,002,661 31
The *net* expenditures for maintenance, from April 1 to June 30, 1885, inclusive, was	15,194 77
The *net* expenditure for maintenance to June 30, 1885, inclusive, was	667,720 73

Bills deposited with the City Treasurer for collection, from April 1 to June 30, 1885, inclusive, amounted to $33,119.37.

As follows:

Water	$26,847 47
Water meters	3,259 50
Setting and repairing meters	1,120 01
Coal and wood, Pettaconset	467 10
Rent of real estate	263 11
Amount carried forward	$31,957 19

Amount brought forward	$31,957 19
Penalties	22 00
Repairing service pipes, etc	21 03
Permanently closing service stops	5 00
Cast iron water pipes	823 09
Labor and materials, laying service pipes	237 45
Stop valves	37 77
Manure from pipe-yard barn	10 00
Old shovels	5 84
	$33,119 37

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to $32,193.36.

As follows:

Water	$27,956 85
Water meters	2,434 40
Setting and repairing meters	895 91
Rent of real estate	215 52
Coal and wood, Pettaconset	467 10
Penalties	28 00
Permanently closing service stops	5 00
Labor and material laying service pipes	142 28
Cast iron water pipe	37 46
Old shovels	5 84
Manure from pipe-yard barn	5 00
	$32,193 36

SEWERS.

All proposals for furnishing cement for the season of 1885, received in reply to advertisements for them, having been rejected, an offer made to Herbert R. Horton was accepted April 28th, and a contract subsequently executed. The amount of this contract will depend almost wholly upon the amount of work ordered by the city council.

June 17th, an offer of Manchester & Hudson to furnish, delivered in this city, flagstones for catch-basin bottoms, was accepted. Amount of offer $100.40.

During the quarter, two hundred and five permits were issued to drain layers; one hundred and twenty-two for new work and eighty-three for extension and repair of drains.

Six drain layers' licenses were issued during the quarter, making the total number June 30, 1885, twenty-two, all of which expire December 31, 1885.

April 18th, contracts for the construction of sewers, which have since been signed, were awarded as follows, viz.:

[The amounts given below are what it is estimated will be paid the contractors for labor and does not include cost of inspection and materials.]

To JOHN KEOGH.

No. of Resolution.	Date of Approval.		
90.	March 12, 1885,	*America street, from Africa to Atwell's avenue,*	$515 40
91.	" " "	*Greenwich street, from Wilson to Warren,* .	482 10
124.	April 6, "	*Peace street, from Broad to Prairie avenue,*	1,791 45
125.	" " "	*Brighton and Vinton streets, from Knight to sewer in Vinton street,*	656 40

April 24th, an offer of John Keogh to construct the following sewer was accepted, viz.;

153.	April 20, 1885,	*Greenwich street, from Warren street to summit in Greenwich street,*	$348 30

May 20th, an offer of James J. Newman to construct the following sewer was accepted, the proposal received having been rejected, and a contract duly executed:

609.	Jan. 2, 1885,	*Lockwood and Plain streets, from Broad to Dudley*, . .	$34,121 70

June 1st, the proposal for constructing the following sewer having been rejected, the offer of John Keogh to do the work was accepted, viz.:

112.	April 2, 1885,	*Acorn street, from the Woonasquatucket river southerly about 500 feet*,	$1,256 81

June 25th, contracts for constructing sewers were awarded which have since been signed, as follows, viz.:

To John Keogh.

184.	May 20, 1885,	*Vernon street, from Batley to a point about 160 feet westerly*, . .	$209 60
209.	" 22, "	*Halsey and Benefit streets, from Congdon to Star*, . . .	2,574 15
239.	June 11, "	*Manning street, from Hope to Thayer*, . .	1,613 80

To James J. Newman.

154.	April 20, 1885,	*Warren street, from Greenwich to Fuller*, .	$731 40
229.	June 6, "	*Burgess street, from High to Cranston*, .	760 70

During the last quarter the work of constructing sewers has been completed in the following streets:

No. of Resolution.	Date of Approval.	
90.	March 12, 1885,	*America street, from Africa to Atwell's avenue.*
91.	" " "	*Greenwich street, from Wilson to Warren.*

112.	April	2, 1885,	*Acorn street, from Wonasquatucket river 500 feet southerly.*
124.	"	6, "	*Brighton and Vinton streets, from Knight to sewer in Vernon.*
125.	"	" "	*Peace street, from Broad to Prairie avenue.*
153.	"	20, "	*Greenwich street, from Warren to summit in Greenwich.*
184.	May	20, "	*Vernon street, from Battey street 160 feet westerly.*

Catch-basins have been constructed as follows:

Five on Pearl street, and one extra inlet.
Two on Cromwell street at Dexter.
Two on Greenwich street near Public.

Work of constructing the following sewers was in progress at the close of the last quarter:

609.	Jan.	2, 1885,	*Lockwood and Plain streets, from Broad to Dudley.*
154.	April	20, "	*Warren street, from Fuller to Greenwich.*
239.	June	11, "	*Manning street, from Thayer to Hope.*
			Repairing outlets of Elm and Point street sewers.

Work upon the following sewers, completing the list ordered by the City Council, had not commenced June 30, 1885, viz.:

No. of Resolution.	Date of Approval.		
397.	Oct.	7, 1882,	*Orms street, from Carroll to present end of sewer in Orms.*
408.	Sept.	8, 1884,	*Webster and Ashburton streets, from Delhi to Martin.*

601. Jan. 2, 1885, *Oriental and Oregon streets, from Admiral street to Borva street, thence across land of the Providence and Worcester Railroad Co. to Ashburton street.*

209. May 22, " *Halsey and Benefit streets, from Congdon to Star.*

229. June 6, " *Burgess street, from High to Cranston.*

277. " 23, " *Congdon street, from Bowen about 100 feet northerly.*

Bills approved on account of sewers from April 1 to June 30, 1885, inclusive, amounted to

For construction, ... $9,716 76

Charged as follows:

Materials	$3,722 72
Rent of wharf and pipe yard	625 00
Clerks' salaries	150 00
Tools	11 51
Testing cement	3 17
Sewer in Acorn street, from Woonasquatucket river southerly	89 95
Sewer in America street, from Africa to Atwell's avenue	569 33
Sewer in Beach street, from summit in said street to Holden	50
Sewer in Brighton and Vinton streets	752 61
Sewer in Greenwich street, from Wilson to Warren	546 35
Sewer in Greenwich street, from Westfield to Warren	354 30
Sewer in Lockwood and Plain streets	95 34
Sewer in Peace street, from Broad to Prairie avenue	2,015 12
Additional catch basins	257 98
Amount carried forward	$9,193 88

Amount brought forward	$9,193 88	
Catch-basins in Cromwell street	84 63	
Catch-basins in Greenwich street	58 25	
Contract reservations on completed sewers	380 00	
	$9,716 76	
For maintenance, ...		$5,722 09

Charged as follows:

Cleaning basins and sewers	$2,807 64
Repairing basins and sewers	620 67
Cleaning and repairing old drains	218 41
Salaries, superintendent and clerks	700 00
Barn expenses	531 19
Tools	377 00
Inspection of connections	333 32
Horses, wagons, carts, harnesses, etc	97 40
Telephone lines	23 00
Sundries	13 46
	$5,722 09

The *net* expenditures for construction of sewers to June 30, 1885, inclusive, was	$1,664,469 90
The *net* expenditures for maintenance of sewers to June 30, 1885, inclusive, was	187,646 49

Bills deposited with the City Treasurer for collection, from April 1 to June 30, 1885, inclusive, amounted to $368.66.

As follows:

Cleaning private drains, springs, etc	$205 91
Use of pump, steam boiler, etc	25 00
Old sewer grating	2 26
Sewer material	70 59
Private drains laid in streets	64 90
	$368 66

During the quarter coupons from bills collected have been returned by the City Treasurer and receipted for, amounting to $237.76.

As follows:

Cleaning private drains, springs, etc.	$141 [illegible]
Use of steam boiler	5 [illegible]
Old sewer grating	2 [illegible]
Sewer material	54 [illegible]
Private drains laid in streets	35 [illegible]
	$237 [illegible]

CHAS. E. CARPENTER,
CLINTON D. SELLEW,
Board of Public Works.

P 72315
ASTOR, LENOX AND
TILDEN FOUNDATIONS
1900

ELEVENTH QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING SEPTEMBER 30, 1885.

PROVIDENCE:
PROVIDENCE PRESS COMPANY, PRINTERS TO THE CITY.
1885.

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P 72315
ASTOR, LENOX AND
TILDEN FOUNDATIONS.

REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., October 1, 1885.

TO THE HONORABLE CITY COUNCIL:

In compliance with the requirements of Chapter 207, of the ordinances, approved February 14, 1883, the Board of Public Works respectfully presents its eleventh quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, and the condition and cost of same for the quarter ending September 30, 1885.

HIGHWAYS.

The Board regretted the necessity, from lack of funds, of suspending, July 16, all highway work except cleaning and simple repairs. Plans might have been so made a year ago, by the employment of a less number of men and teams, to keep the department in money to the end of the fiscal year; but the Board presumed that, considering the great extent of curbing and road building ordered, the city council would be anxious to see the work driven even with the prospect of having to make an extra appropriation. As, however, an extra appropriation was not made, the Board arranged its affairs according to the balance it had to draw upon — hence the suspension as above stated.

The stoppage of so much work in the best time of the year for its prosecution naturally occasioned some unpleasantness. Abuttors on streets ordered to be curbed and built fretted,

travelers on highways needing repairs complained of the roughness of them, and laborers were anxious to learn how soon they were likely to again have employment.

The additional appropriation of ten thousand dollars for "repairs," by resolution of the city council approved September 10th, set the wheels in motion once more. A number of streets were immediately put into good order; and work in this line is being pushed to the intent that before winter all important roadways may be in proper condition.

July 16th, the offer of Dexter Gorton to move the fence in front of the school-house lot on Greenwich street, for the sum of thirty-three dollars, was accepted.

September 8th, the proposal of the Providence Coal Co. to furnish the coal required by the Highway Department for one year, was accepted, the cartage to be done by the city.

September 10th, the offer of Henry S. Taft to furnish delivered in this city one thousand feet of street curbing, was accepted. Amount, $500.00.

During the quarter bills for curbing set and unpaid have been certified to the assessors of taxes, amounting to $7,834.69.

Statements have been prepared of the cost of curbing set, ascertained by the Board and certified to the Board of Aldermen for approval, as follows, viz:

Arnold street, from East to Governor	$460 59
Cromwell street, from Greenwich to Dexter	1,098 26
Cypress street, from Camp to North Main	1,590 51
Moore street, from Broad to Updike	928 46
Pearl street, from Beacon to Plain	1,055 56
Warren street, from Fuller to Dexter	939 21
	$6,072 59

Ten permits were issued to open streets.

During the last quarter portions of the following streets have been repaired:

Angell street,	Hospital street,
Borden street,	Knight street,
Broad street,	Lockwood street,
Battey street,	Oakland street,
Chestnut street,	Oxford street,
Claverick street,	Page street,
Hope street,	Pine street,

Transit street.

During the quarter ending September 30, 1885, the following work was completed, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of order.	
Sept. 20, 1883,	*Greenwich street and Elmwood avenue, east side, from Potter's avenue to Adelaide.*
Sept. 20, "	*Elmwood avenue, west side, from Atlantic street to Adelaide avenue.*
Oct. 16, 1884,	*Greenwich street, from Earl to Carter.*
June 4, 1885,	*Dorrance, Pine and Eddy streets, adjoining estate of Freemasons' Hall Co.*
July 16, "	*Elmwood avenue, on easterly side of city's land, between Greenwich and Atlantic streets.*

To be Repaired.

Date of order.	
June 4, 1885,	*Friendship and Eddy streets in the immediate vicinity of the estate of Michael Fitzgerald.*
" 14, "	*Dorrance, Pine and Eddy streets, in the immediate vicinity of the estate of the Freemasons' Hall Co.*

Curbing to be Set, Gutters Paved and Sidewalks Concreted.

Date of order.	
June 18, 1885,	*Corner of Atwell's avenue and America street, adjoining the lot occupied by new fire station and evening school.*

Curbing to be Re-Set and Gutters Paved.

No. of Resolution. Date of Approval.

151. April 20, 1885, *Tockwotton street, north side, from Ives to Gano.*

The following work was, September 30, 1885, in progress, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of order.

Oct. 18, 1883, *Manning street, from Hope to Thayer.*

May 15, 1884, *Fremont street, from Governor to Ives.*

To be Brought to Grade.

Dec. 27, 1883, *Highway, adjacent to estate of Wanton Durfee and Humphrey Almy, on Dyer and Custom House streets:* Brought to grade except the portion in front of Humphrey Almy estate, which has been delayed to avoid legal and other difficulties.

May 21, 1885, *Westfield street, from a point about 100 feet west of Fuller to Harrison:* the street has been graded; there is, however, a small amount of gravel on the sidewalk to be removed.

To be Repaired.

Date of order.

June 4, 1885, *Peck and Friendship streets, in the immediate vicinity of the estate of Charles D. W. and Henrietta M. K. Brownell:* finished except repairing sidewalk.

Obstructions to be Removed.

Date of order.

Oct. 4, 1883, *Branch avenue, from Smithfield avenue to Douglas avenue:* Obstructions in the way of grading the avenue have been removed so as to make it passable. The line of occupation, in places, encroaches upon the avenue as laid out.

To be put in Condition Safe and Convenient for Public Travel.

Date of order.

April 16, 1885, *Fenner avenue, from Cranston street to Reservoir avenue.*

Concrete Sidewalks.

Date of order.

Aug. 3, 1882, *Julian and Capron streets, adjoining Julian street school house estate:* Portion in Julian street finished.

To be Filled.

Date of order.

July 17, 1884, *Pond opposite works of the Nicholson File Company:* A small portion of the pond has been filled.

To take Possession of.

Date of order.

Dec. 18, 1884, *Clinton street, from present termination to Plain street:* Obstructions have been removed and street partially brought to grade.

The following work ordered by the Board of Aldermen and City Council had not been commenced September 30, 1885, viz:

Sidewalks to be Curbed and Gutters Paved.

Date of order.

Aug. 3, 1882, *Capron street, in front of Julian street school-house estate.*

Oct. 19, " *Potter's avenue, from Broad street to Greenwich.*

Nov. 16, " *Eddy street, from Thurber's avenue to Pavilion avenue.*

Dec. 21, 1882, *Clinton street, from Prairie avenue to Gay street.*

May 7, 1883, *Reservoir Avenue, east side, from Greenwich street to the railroad bridge.*

July 19, " *Chalkstone avenue, from Charles street to Black.*

Nov. 15, " *Wellington street, from East Beacon to Pearl.*

Dec. 31, " *Dexter street, from Cranston to Cromwell.*

June 19, 1884, *Carter street, from Greenwich to the railroad.*

" 26, " *Diman place, from Angell street to Asylum wall.*

" " " *Richmond street, from Ship to Point.*

" " " *Stimson avenue, from Hope street to Angell.*

Sept. 11, " *Doyle avenue, from East avenue to Olney street.*

" 18, " *George street, from Ives to Gano.*

" " " *Miller street, from Division to Dexter.*

Oct. 16, " *Burnett street, from Greenwich to Public.*

" " " *Daboll street, from Greenwich to Updike.*

" " " *Grove street, from Almy to Tobey.*

" " " *Webster street, from Delhi to Ambrose.*

March 19, 1885, *Blackstone street, south side, from Plain to Eddy.*

April 16, " *Burnside street, from Public to Potter's avenue.*

" " " *Peace street, from Broad to Prairie avenue.*

" " " *Woodland street, from Park to Holden.*

May 21, " *Adelaide avenue, north side, from Elmwood avenue to Melrose street.*

May 21, " *Chalkstone avenue, from Douglas to Smith street.*

" " " *Clinton street, from Gay to Plain.*

" " " *Cushing street, from Prospect to Brook.*

" " " *Davis street, west side, from Common to Orms.*

June 4, 1885, *Beacon street, from Lockwood to Pearl.*
" " " *Creighton street, from Prospect to Brown.*
" 18, " *Blackstone street, north side, from Eddy to Culver.*
" " " *Bond street, from Atwell's avenue to Federal street.*
" " " *George street, from Governor to Ives.*
" " " *Pekin street, from Chalkstone avenue to Bailey street.*
" " " *Public street, from Broad to Greenwich.*
July 9, " *Elmwood avenue, from Adelaide avenue southerly 560 feet.*
" 16, " *Brighton street, from Knight to Vinton.*
" " " *Fenner avenue, adjoining estate of O. Burchard and Harriet A. Swarts.*
" " " *Grant street, from Knight to Carpenter.*
" " " *Sheldon street, from Brook to Hope.*
Sept. 17, " *Pleasant street, from North Main to Camp.*
" " " *Vineyard street, from Hawthorne to Carter.*

Obstructions to be Removed.

Date of order.
Sept. 10, 1885, *Governor street, between Wickenden and Tockwotton.*

Curbstones to be Re-Set and Gutters Re-paved.

Date of order.
July 17, 1884, *Waterman street, from Brown to Brook.*

Paved with Granite Blocks.

No. of Resolution. Date of Approval.
332. July 5, 1884, *Richmond street, from Ship to Point.*
85. Mar. 6, 1885, *Market square and College street, portions of.*

Abate Nuisance on.

No. of Resolution. Date of Approval.
218. May 20, 1882, *Mitchell street, caused by overflow of surface water.*

To be Brought to Grade.

Date of order.

June 19, 1884, *Benefit street, from south line of the estate of the First Congregational Society to Benevolent street.*

No. of Resolution. Date of Approval.

517. Oct. 28, 1884, *Bucklin street, from Carter to Earl.*

Date of order.

June 18, 1885, *Austin street, from Potter's avenue to Public street.*

" " " *Hamilton street, from Potter's avenue to Adelaide avenue.*

To Take Possession of.

Date of order.

April 16, 1885, *Earl's lane (now Pleasant street), from North Main to Camp street.*

" " " *Gordon avenue, from Public to Colfax street.*

Surface Drain to be Put In.

No. of Resolution. Date of Approval.

280. June 23, 1885, *At the corner of Cranston and Dexter streets.*

The amount of bills approved on account of highways, from July 1 to September 30, 1885, inclusive, was - - - - - $37,757 51

Classified as follows:

Cleaning streets	$6,793 29
Repairs on unpaved streets	9,545 45
Repairs on paved streets	791 65
Crushed stone, materials and labor	5,302 20
Barn expenses	2,369 53
Salaries: superintendent, clerks and inspectors	1,280 76
Blacksmith and wheelwright shop	808 04
Repairs on stone crushers	561 90
Amount carried forward	$27,452 82

Amount brought forward	$27,452 82	
Horses, wagons, carts, harneses, etc.	425 32	
Tools, implements, etc.	419 87	
Steam rollers, repairs and supplies.	348 55	
Labor on materials	299 01	
Watchman at city yard	227 25	
Harness shop, materials and labor	221 13	
Watering streets	95 88	
Stone, paving and crosswalk	66 90	
Sundries	52 88	
Telephone lines	38 70	
Office expenses, city yard	6 00	
		$29,653 81

NEW WORK, BUILDING AND RE-BUILDING STREETS.

SIDEWALKS CURBED AND GUTTERS PAVED.

Cromwell, from Greenwich to Dexter	$186 53	
Cypress, from North Main to Camp	4 00	
Dorrance, Pine and Eddy, adjoining estate of Freemasons' Hall Co.	382 36	
Elmwood avenue, west side, from Atlantic street to Adelaide avenue	246 67	
Elmwood avenue, west side, from Greenwich to Atlantic	94 38	
Fremont, from Governor to Ives	7 20	
Greenwich street and Elmwood avenue	2,720 84	
Greenwich, from Earl to Carter	513 67	
Pearl, from Beacon to Plain	8 10	
Tockwotton, north side, from Ives to Gano	334 57	

TO BE REPAIRED.

Gangway, on northerly side of fire station, between Mill and North Main streets, known as "Thurber's Steps."	158 00	
Friendship and Eddy streets, in the immediate vicinity of the estate of Michael Fitzgerald	310 36	
Peck and Friendship streets, in the immediate vicinity of the estate of Charles D. W. and Henrietta M. K. Brownell	562 76	

TAKE POSSESSION OF.

Clinton street, from present termination to Plain street	414 75	
Amounts carried forward	$5,944 19	$29,653 81

Amounts brought forward.....	$5,944 19	$29,653 81

PUT IN CONDITION SAFE FOR PUBLIC TRAVEL.

Fenner avenue, from Cranston street to Reservoir avenue.....	1,546 51	

GRADE AND TURNPIKE ROADWAY.

Westfield street, from near Fuller to Harrison..	236 23	

CURBED, GUTTERS PAVED, AND SIDEWALKS CONCRETED.

Atwell's avenue and America street, adjoining the lot occupied by new fire station and evening school.....	376 77	8,103 70
		$37,757 51

Bills deposited with the City Treasurer for collection, from July 1 to September 30, 1885, inclusive, amounted to - - - - $1,808 38

As follows:

Labor and materials.....	$1,199 98
Street sweepings.....	517 77
Manure from barn.....	80 63
Chopping blocks.....	7 50
Stepping block.....	2 50
	$1,808 38

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to - - $547 70

As follows:

Labor and materials.....	$111 90
Street sweepings.....	326 29
Manure from barn.....	80 63
Tools.....	21 88
Chopping blocks.....	4 50
Stepping block.....	2 50
	$547 70

The amount of bills approved on account of highways for the fiscal year ended September 30, 1885, was - - - - - $199,930 86

Charged as follows:

Cleaning streets	$22,120 50	
Repairs on unpaved streets	32,536 18	
Repairs on paved streets	5,055 70	
Crushed stone, material and labor	33,589 31	
Screening gravel	12,692 39	
Stone, paving and crosswalk	12,598 67	
Barn expenses	7,835 07	
Salaries: superintendent, clerks and inspectors	5,124 57	
Blacksmith and wheelwright shop	4,285 58	
Repairs on stone crushers	3,192 86	
Labor on materials	2,957 47	
Tools, implements, etc	2,889 76	
Horses, wagons, carts, harnesses, etc	2,619 14	
Reomving ice and snow from streets	1,348 62	
Harness shop, material and labor	1,299 75	
Steam rollers, repairs and supplies	1,257 28	
Watchman at city yard	758 85	
Sundries	427 41	
Watering streets	95 88	
Fencing streets, materials and labor	60 28	
Office expenses, city yard	59 54	
Telephone lines	53 35	
		$152,858 16

NEW WORK, BUILDING AND RE-BUILDING STREETS.

SIDEWALKS CURBED AND GUTTERS PAVED.

Adelaide avenue, from Broad to Niagara	$252 75	
Arnold, from East to Governor	712 80	
Asia, from Vinton to Knight	120 84	
Burnside, adjoining ward room and fire station	80 22	
Clinton, from Broad to Prairie avenue	9 00	
Constitution, from Lester to Wilson	136 29	
Cromwell, from Greenwich to Dexter	1,532 82	
Cypress, from North Main to Camp	2,888 41	
D, from Lester to Booth	832 69	
Dorrance, Pine and Eddy, adjoining estate of Freemasons' Hall Co	382 36	
Elmwood avenue, west side, from Atlantic street to Adelaide avenue	246 67	
Amounts carried forward	$7,194 85	$152,858 16

Amounts brought forward	$7,194 85	$152,858 16
Elmwood avenue, west side, from Greenwich to Atlantic	94 38	
Fremont, from Governor to Ives	21 86	
Greenwich street and Elmwood avenue	3,489 76	
Greenwich, from Earl to Carter	513 67	
Holden, from Beach to Smith	7 20	
Lester, north side, from Gilmore to Harrison	59 41	
Lester, south side, from Gilmore to Harrison	57 88	
Manning, from Hope to Thayer	1,110 58	
Mawney, from Greenwich to Updike	18 00	
Moore, from Broad to Updike	1,821 64	
Pearl, from Beacon to Plain	1,727 45	
Pike, from South Main to Benefit	661 49	
Polk, from Pettis to Hedley	7 20	
Providence, from Dudley to Pearl	18 00	
Somerset, from Friendship to West Clifford	3 60	
Somerset, from West Clifford to Providence	3 60	
Taber avenue, from Angell street to near Humboldt avenue	1,778 93	
Tockwotton, north side, from Ives to Gano	2,186 97	
Transit, from Governor to Ives	7 20	
Vinton, from Broadway to Carpenter	140 62	
Warren, from Fuller to Dexter	1,314 43	
To be Repaired.		
Gangway, on northerly side of fire station, between Mill and North Main streets, known as "Thurber's steps,"	397 00	
Friendship and Eddy streets, in the immediate vicinity of the estate of Michael Fitzgerald	310 36	
Peck and Friendship streets, in the immediate vicinity of estate of Charles D. W. and Henrietta M. K. Brownell	562 76	
Take Possession of.		
Ashburton street, to Charles	50 40	
Clinton street, from present termination to Plain street	4,908 89	
Put in Condition Safe for Public Travel.		
Fenner avenue, from Cranston street to Reservoir avenue	2,414 96	
Amounts carried forward	$30,883 09	$152,858 16

Amounts brought forward.....	$30,883 09	$152,858 16
Grade and Turnpike Roadway.		
Westfield street, from near Fuller to Harrison....	365 61	
Curbed, Gutters Paved and Sidewalks Concreted.		
Atwell's avenue and America street, adjoining the lot occupied by new fire station and evening school.....	376 77	
Worked to Grade.		
North Main, from Sexton to Cemetery.....	14,468 14	
Drain or Gutter for Surface Water.		
Broad and Cambridge streets, to land of Gustave Bender.....	103 00	
Seymour street, from Eddy to Burgess cove inlet,	663 29	
Macadamized.		
Point street.....	103 24	
Concrete Sidewalks.		
Burnside and Public streets, adjoining ward room and fire station.....	88 71	
Pave with Granite Blocks.		
Point and Friendship streets.....	20 85	$47,072 70
		$199,930 86

The amount of expenditures on account of sidewalks and curbing from July 1 to September 30, 1885, was $1,423.74.

Sidewalks and curbing bills deposited with the city treasurer for collection from July 1 to September 30, 1885, inclusive, amounted to $6,042.25.

During the quarter coupons from sidewalks and curbing bills collected have been returned by the city treasurer, and receipted for, amounting to $854.33.

Uncollected sidewalks and curbing bills returned by the city treasurer, were certified to the assessors of taxes August 4, 1885, amounting to $7,834.69.

The amount of expenditures for sidewalks and curbing during the fiscal year ended September 30, 1885, was $15,223.27.

WATER WORKS.

It was remarked in the eighth quarterly report, made last January, that considerable progress had been made in the removal of impurities from the Pawtuxet river. The Board is now able to say that very much has been done. Of privies, sinks, pig-pens and barns which had more or less drainage into the stream, six-sevenths were shut off by September 30, and a part of the remaining seventh by the time this report was committed to the printer.

There are a few manufacturing establishments which discharge the waste from wool-scouring, from bleaching and from dyeing, into the river; but the owners of most of them are considering plans for utilizing this waste matter. The Board has not pressed in this direction so much as in the direction of the former class of defiling stuff, believing that it is less liable to affect the public health.

When the water works were projected it was a generally accepted opinion that chemical analysis could readily disclose the harmful impurities in water supply, but science seems now to assert that some mischievous agents elude even extraordinary tests. To this class of mischief makers the Board has given the more close attention, because the really excellent character of our Pawtuxet as shown in the bimonthly analysis is a sufficient warrant for allowing time to manufacturers in their study of methods, whereby their wastes may be disposed of without cost, and perhaps with some profit.

July 20th, a portion of the mill site at Pawtuxet was leased to John H. Manchester for the term of one year for the sum of thirty dollars.

July 23d, the offer of the Warren Foundry and Machine Co. to furnish, delivered in this city, sixteen 30-inch cast iron water pipes for the sum of thirty-one dollars per ton of 2,240 pounds, was accepted.

July 23d, the proposal of Hopkins, Pomroy & Co. to furnish, delivered as required at Pettaconset Pumping Station, thirteen hundred tons of coal, egg size, was accepted. A contract was subsequently executed with said company which will amount to $5,512.00.

July 23d, the proposal of John R. White & Son to furnish, delivered at Hope Pumping Station, one hundred tons of coal, egg size, and two hundred tons stove size, was accepted and a contract was afterwards executed which will amount to $1,264.00.

August 14th, the offer of Thomas Phillips & Co. to furnish five thousand pounds of pig lead, delivered on wharf occupied by the city, was accepted. Amount, $230.00.

During the quarter ending September 30, 1885, water-pipes were laid as follows, viz.:

12-INCH.

In Park avenue, ... 2.2 feet.

8-INCH.

In Elmwood and Park avenues, Cranston, and in Irving street, . . . 1,202.1 feet.

6-INCH.

In Corry and Park avenues, Wellington and Benedict streets, Cranston; in North Allen street, Johnston, and in Manning, Gesler, Andem, Brook, Commodore, Penn, Larch, Irving, Luna, Chatham, Africa, Tefft and Almy streets and Munroe's court,	7,663.5 feet.
Total, ...	8,867.8 feet,

or 1.6795 miles.

Four fire hydrants have been set during the last quarter, one in each of the following locations:

Andem street, north side, 299 feet east of Academy avenue.
Commodore street, east side, 486 feet south of Denison street.
Larch street, northwest corner of Ivy street.
Tefft street, east side, 15 feet north of Asia street.

The total number of fire hydrants is now twelve hundred and thirty-eight; twelve hundred and twenty-eight flush and ten post hydrants.

The work of laying the following water pipes, completing the list ordered by the city council, had not been commenced September 30, 1885, viz.:

No. of Resolution.	Date of Approval.	
324.	June 18, 1885,	*Clinton street, between Gay and Staniford.*
409.	Sept. 24, "	*Abbott street, between Knowles and Highland.*
410.	" " "	*Pleasant street, from end of pipe to North Main.*

Statement of sizes and lengths of pipes laid since the commencement of the work:

36-inch	10,084	feet.
30-inch	59,637	feet.
24-inch	23,942	feet.
20-inch	6,854.8	feet.
16-inch	31,574	feet.
12-inch	56,853.6	feet.
10-inch	14,758.1	feet.
8-inch	139,161.15	feet.
6-inch	647,034.67	feet.
Total	989,899.32	feet,

or, 187.4809 miles.

The average daily consumption of water during the last quarter was 5,169,426 gallons.

During the quarter ending September 30, 1885, one hundred and sixty-nine water meters were set, of which number forty-three were to replace condemned meters. The use of eight meters was discontinued. The following meters were in use at the close of the quarter:

KIND.	SIZES.							Total.
	⅝ in.	¾ in.	1 in.	1½ in.	2 in.	3 in.	4 in.	
Ball & Fitts, piston	2,863	549	130	47	7	1	.....	3,597
Ball & Fitts, rotary	1	.....	22	27	3	7	3	63
Crown	2,017	347	100	33	11	3	3	2,514
Fales, Jenks & Sons	117	98	7	1	2	.....	1	226
Worthington	119	1	.....	.....	1	.....	1	122
	5,117	995	259	108	24	11	8	6,522

Three plumbers licenses were issued during the quarter, making the total number sixty-five, all of which expire December 31, 1885.

Six hundred and eighty-two permits to do plumbing work were issued during the quarter.

One hundred and eighty-nine applications for water were made during the quarter, making the total number September 30, 1885, thirteen thousand two hundred and forty-six.

The number of new service stops opened during the quarter was two hundred and four.

The total number of service stops opened to September 30, 1885, inclusive, was twelve thousand five hundred and seventy. The number in actual use September 30, 1885, was eleven thousand nine hundred and two.

The amount of bills approved on account of water works, from July 1 to September 30, 1885, inclusive, was

For construction and extension, . . $27,721 15

Classified as follows:

Cast iron water pipes	$17,891 19
Prevention of defilement of the Pawtuxet	4,787 22
Laying water pipes	2,107 65
Laying service pipes	771 25
Special castings	871 08
Rent of wharf and pipe yard	625 00
Barn expenses	293 44
Labor on and carting pipes	169 21
Stop valves	75 57
Wharf salaries	75 00
Horse and wagon account	22 85
Tools	19 69
Taps and stops	12 00
	$27,721 15

For maintenance, ... $19,652 82

Classified as follows:

Pettaconset Pumping Station.

Coal and wood	$2,010 17	
Sundries	1,050 37	
Engineers	600 00	
Firemen	434 40	
Corliss pumping engine and house	495 72	
Lights	345 18	
Real estate	270 49	
Oil, waste and packing	257 06	
Superintendence	249 99	
Labor on fuel	131 70	
Care of grounds	90 15	
Barn expenses	43 80	
Worthington pumping engine	8 47	
Horse and wagon account	4 50	
		$5,992 00

Sockanosset Reservoir.

Watchman	$138 00	
Care of reservoir, grounds, gate house, etc.	97 52	
		$235 52

Hope Pumping Station.

Coal and wood	$881 50	
Engineers	800 01	
Firemen	402 00	
Lights	224 07	
Pumping engine No. 1, (Corliss)	207 43	
Oil, waste and packing	48 03	
Sundries	40 43	
Engine house	7 10	
Pumping engine No. 2, (Nagle)	61	
		$2,611 18

Hope Reservoir.

Watchman	$207 00	
Care of reservoir, grounds, gate house, etc.	258 07	
		$465 07

Pipe Line and Service Stops.

Repairs	$624 42	
Superintendence, salaries	600 00	
		$1,224 42
Amount carried forward		$10,528 19

Amount brought forward		$10,528 19

METER DEPARTMENT.

Water meters	$4,302 40	
Setting and repairing meters	1,257 86	
		$5,560 26

MISCELLANEOUS.

Clerks' and inspectors' salaries	$1,991 65	
Telephone lines	334 31	
Superintendent's clerks	300 00	
Analyses of water	277 15	
Barn expenses	234 06	
Public drinking fountains and troughs	122 34	
Buildings at pipe yard	97 80	
Horse hire	83 36	
Sundries	69 21	
Real estate at Pawtuxet	30 48	
Horse and wagon account	14 11	
Pipe yard office expenses	9 90	
		$3,564 37
		$19,652 82

The amount of expenditures from July 1 to September 30, 1885, inclusive, was	$47,373 97
The total expenditures to September 30, 1885, inclusive, was.	6,202,587 68
The *net* expenditure for construction and extension, from July 1 to September 30, 1885, inclusive, was	26,381 32
The *net* expenditure for construction and extension to September 30, 1885, inclusive, was	5,029,042 63
The *net* expenditure for maintenance from July 1 to September 30, 1885, inclusive, was	13,982 37
The *net* expenditure for maintenance to September 30, 1885, inclusive, was	681,703 10

Bills deposited with the city treasurer for collection, from July 1 to September 30, 1885, inclusive, amounted to $36,381 40

As follows:

Water	$30,550 67
Water meters	3,489 00
Setting and repairing meters	847 28
Lowering water pipe, town of Johnston	99 90
Rent of real estate	60 43
Penalties	30 00
Amount carried forward	$35,077 28

Amount brought forward	$35,077 28
Permanently closing service stops	20 00
Repairing service pipes, etc	13 50
Telegraph pole	1 50
Cast iron water pipe	769 22
Labor and materials, laying service pipes	349 60
Labor and materials, laying private fire supplies	144 30
Manure from barn	6 00
	$36,381 40

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to - - $35,342 73

As follows:

Water	$28,339 35
Water meters	3,976 80
Setting and repairing meters	1,343 10
Rent of real estate	308 02
Repairing service pipes, etc	21 03
Permanently closing service stops	20 00
Penalties	18 00
Telegraph pole	1 50
Cast iron water pipe	770 29
Labor and materials, laying service pipes	303 68
Labor and materials, laying private fire supplies	169 96
Stop valves	60 00
Manure from barn	11 00
	$35,342 73

The amount of bills approved on account of water works for the fiscal year ended September 30, 1885, inclusive, was

For construction and extension, - - $53,574 65

Charged as follows:

Cast iron water pipes	$23,035 36
Prevention of defilement of the Pawtuxet	8,096 01
Laying water pipes	6,567 67
Special castings	2,783 64
Amount carried forward	$40,482 68

Amount brought forward	$40,482 68	
Laying service pipes	2,288 53	
Stop valves	2,255 72	
Service pipe	2,044 84	
Fire hydrants, boxes and covers	1,533 20	
Taps and stops	1,263 25	
Rent of wharf and pipe yard	1,250 00	
Barn expenses	1,202 41	
Wharf salaries	450 00	
Horse and wagon account	346 99	
Labor on and carting pipes	333 34	
Tools	119 66	
Sundries	4 03	
	$53,574 65	

For maintenance, - - - - - $68,433 05

Charged as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$6,933 05	
Sundries	3,070 25	
Engineers	2,400 00	
Firemen	1,721 35	
Superintendence	999 96	
Oil, waste and packing	929 95	
Corliss pumping engine and house	800 30	
Lights	779 13	
Engine house, (Cornish)	573 85	
Labor on fuel	451 35	
Real estate	417 55	
Care of grounds	153 45	
Barn expenses	122 08	
Cornish pumping engine	61 60	
Horse and wagon account	34 00	
Worthington pumping engine	16 47	
		$19,464 34

SOCKANOSSET RESERVOIR.

Watchman	$547 50	
Care of reservoir and grounds, gate houses, etc.	156 38	
		703 88

HOPE PUMPING STATION.

Engineers	$3,200 04	
Firemen	1,482 00	
Amounts carried forward	$4,682 04	$20,168 22

Amounts brought forward	$4,682 04	$20,168 22
Coal and wood	893 31	
Lights	529 98	
Pumping engine No. 1, (Corliss)	208 80	
Pumping engine No. 2, (Nagle)	154 92	
Sundries	135 68	
Oil, waste and packing	131 46	
Engine house	67 58	
		6,803 77

HOPE RESERVOIR.

Watchman	$821 25	
Care of reservoir and grounds, gate houses, etc.	942 87	
		1,764 12

PIPE LINE AND SERVICE STOPS.

Repairs	$4,581 81	
Superintendence, salaries	2,400 00	
		6,981 81

METER DEPARTMENT.

Water meters	$12,099 64	
Setting and repairing meters	4,560 65	
		16,660 29

MISCELLANEOUS.

Clerks' and inspectors' salaries	$7,916 62	
Town of Cranston, tax	4,300 00	
Superintendent's clerks	1,200 00	
Telephone lines	717 00	
Barn expenses	434 34	
Analyses of water	380 30	
Horse hire	250 00	
Buildings at pipe yard	97 80	
Sundries	238 64	
Real estate at Pawtuxet	143 78	
Horse and wagon account	98 40	
Public drinking fountains and troughs	217 37	
Pipe yard office expenses	47 99	
Real estate at Lincoln	12 60	
		16,054 84
		$68,433 05

SEWERS.

July 21st, the offer of Goff & White to furnish, delivered, one thousand feet of six-inch salt-glazed vitrified pipes was accepted. Amount, $115.00.

Assessments for the cost of constructing sewers in the following streets have been completed and certified to the City Treasurer, viz.:

Acorn street, from the Woonasquatucket river southerly, about 500 feet	$1,517 21
America street, from Africa to Atwell's avenue	916 51
Brighton street, from Knight to Vinton, and in Vinton street, from Brighton street to the present sewer in said Vinton street	1,135 17
Burgess street, from High to Cranston	1,162 98
Greenwich street, from Wilson to Warren	838 19
Greenwich street, from Warren street to the summit of Greenwich street	779 71
Manning street, from Hope to Thayer	1,956 34
Peace street, (now Chester avenue,) from Broad to Prairie avenue	3,177 03
Vernon street, from Battey street to a point about 100 feet westerly from said Battey street	460 11
Warren street, from Greenwich to Fuller	1,454 82
	$13,398 07

During the quarter one hundred and forty permits were issued to drain layers; eighty-two for new work, and fifty-eight for extension and repair of drains.

August 11th, contracts for the construction of sewers, which have since been signed, were awarded as follows, viz.:

[The amounts given below are what it is estimated will be paid the contractors for labor, and does not include cost of inspection and materials, or rock excavation for which the contracts and specifications provide a price per cubic yard.]

To John Keogh.

No. of Resolution.	Date of Approval.		
277.	June 23, 1885,	*Congdon street, from Bowen street northerly 100 feet,* - -	$180 10

306.	July 8, 1885,	*Thayer street, from Williams to John,* -	$292 55

To JAMES J. NEWMAN.

302.	July 8, 1885,	*Howell and Camp sts., from East avenue to Lippitt street,* - -	1,584 25
303.	July 8, 1885,	*Union street, from Worcester street southerly to present sewer,*	127 60

August 11, 1885, an offer of James J. Newman to construct the following sewer was accepted, (the proposal received having been rejected,) and a contract duly executed:

408.	Sept. 8, 1884,	*Webster and Ashburton streets, from Delhi to Martin,* - -	$5,755 35

September 29th, contracts for the construction of sewers, which have since been signed, were awarded as follows, viz.:

To JAMES J. NEWMAN.

369.	Sept. 10, 1885,	*Summer street, from Broad to Conduit,* -	$438 65
396.	" 12, "	*Cushing street, from Thayer to Brook,* -	429 00
397.	" " "	*Abbott street, from Knowles to North Main,* - - -	1,028 20

To JOHN KEOGH.

294.	July 8, 1885,	*Pleasant street, from Camp to North Main,*	$1,840 25

332.	July 18, 1885,	*Clinton street, from Prairie ave. to Plain street,* - - -	$2,235 30
368.	Sept. 10, "	*Kenyon street, from America to Federal,* -	1,497 90
398.	Sept. 12, "	*West Clifford street, from Dudley to Pearl,*	1,272 70

During the last quarter the work of constructing sewers has been completed in the following streets:

No. of Resolution.	Date of Approval.	
154.	April 20, 1885,	*Warren street, from Fuller to Greenwich.*
209.	May 22, "	*Halsey and Benefit streets, from Congdon to Star.*
229.	June 6, "	*Burgess street, from High to Cranston.*
239.	June 11, "	*Manning street, from Thayer to Hope.*
277.	" 23, "	*Congdon street, from Bowen about 100 feet northerly.*
303.	July 8, "	*Union street, from Worcester street southerly to present sewer.*

Work of constructing the following sewers was in progress at the close of the last quarter:

408.	Sept. 8, 1884,	*Webster and Ashburton streets, from Delhi to Martin.*
609.	Jan. 2, 1885,	*Lockwood and Plain streets, from Broad to Dudley.*
302.	July 8, "	*Howell and Camp streets, from East avenue to Lippitt street.*
306.	" " "	*Thayer street, from Williams to John.*

Work upon the following sewers, completing the list

ordered by the City Council, had not commmenced September 30, 1885, viz.:

No. of Resolution.	Date of Approval.	
397.	Oct. 7, 1882,	*Orms street, from Carroll to present end of sewer in Orms.*
601.	Jan. 2, 1885,	*Oriental and Oregon streets, from Admiral street to Borva street, thence across land of the Providence and Worcester Railroad Co. to Ashburton street.*
294.	July 8, "	*Pleasant street, from Camp to North Main.*
332.	" 18, "	*Clinton street, from Prairie avenue to Plain street.*
368.	Sept. 10, "	*Kenyon street, from America to Federal.*
369.	" " "	*Summer street, from Broad to Conduit.*
396.	" 12, "	*Cushing street, from Brook to Thayer.*
397.	" " "	*Abbott street, from Knowles to North Main.*
398.	" " "	*West Clifford street, from Dudley to Pearl.*
411.	" 24, "	*Vernon street, from present sewer to Vinton.*
436.	" 25, "	*Spring street, from High to Pond.*

Bills approved on account of sewers from July 1 to September 30, 1885, inclusive, amounted to

For construction, - - - - - $48,503 61

Charged as follows:

Materials	$8,450 25
Rent of wharf and pipe yard	625 00
Clerk's salary	150 00
Tools	15 64
Amount brought forward	$9,240 89

Amount brought forward	$9,240 89
Sewer in Acorn street, from Woonasquatucket river southerly	1,230 61
Sewer in America street, from Africa to Atwell's avenue	11 10
Sewer in Brighton and Vinton streets	7 20
Sewer in Burgess street, from High to Cranston.	822 42
Sewer in Congdon street, from Bowen street northerly	990 90
Sewer in Greenwich street, from Wilson to Warren	7 20
Sewer in Greenwich street, from Westfield to Warren	5 40
Sewer in Halsey and Benefit streets	5,962 82
Sewer in Howell and Camp streets	4,023 47
Sewer in Lockwood and Plain streets	22,316 73
Sewer in Manning street, from Thayer to Hope.	1,820 06
Sewer in Peace street, from Broad to Prairie avenue	10 80
Sewer in Thayer street, from Williams to John..	306 45
Sewer in Union street, from Worcester street southerly	147 21
Sewer in Vernon street, from Battey street westerly	232 83
Sewer in Warren street, from Fuller to Greenwich	784 17
Sewer in Webster and Ashburton streets	531 04
Catch-basins in Cromwell street	8 80
Catch-basins in Greenwich street	18 26
Additional catch-basins	3 25
Contract reservations on completed sewers	22 00
	$48,503 61

For maintenance, - - - - $11,670 13

Charged as follows:

Cleaning basins and sewers	$5,463 74
Repairing basins and sewers	331 67
Cleaning and repairing old drains	884 57
Elm street sewer, repairs to outlet	1,657 73
Point street sewer, repairs to outlet	811 90
Horses, wagons, carts, harnesses, etc	593 53
Salaries, superintendent, clerks and inspectors..	525 00
Tools	516 83
Amount brought forward	$10,784 97

Amount brought forward	$10,784 97
Barn expenses	316 17
Care of dumps	281 25
Inspection of connections	249 99
Telephone lines	19 64
Sundries	18 11
	$11,670 13

The *net* expenditure for construction of sewers to September 30, 1885, inclusive, was $1,712,933 45

The *net* expenditure for maintenance of sewers to September 30, 1885, inclusive, was 199,156 89

Bills deposited with the City Treasurer for collection from July 1 to September 30, 1885, inclusive, amounted to $117 91

As follows:

Cleaning private drains	$49 00
Filling cisterns and boilers	31 00
Use of pump	10 00
Private drains laid in streets	15 84
Sewer material	12 07
	$117 91

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to . . $224 69

Cleaning private drains, springs, etc.	$119 73
Use of pump, boiler, etc.	28 00
Filling cisterns	12 00
Private drains laid in streets	45 59
Sewer material	19 37
	$224 69

The amount of bills approved on account of sewers for the fiscal year ended September 30, 1885, was

For construction, ... $65,638 00

Charged as follows:

Materials	$15,275 34
Rent of wharf and pipe yard	1,250 00
Clerks' salaries	450 00
Testing cement	52 17
Tools	38 59
Sewer in Acorn street, from Woonasquatucket river southerly	1,320 56
Sewer in America street, from Africa street to Atwell's avenue	580 43
Sewer in Beach street, from summit in said street to Holden street	492 74
Sewer in Brighton and Vinton streets	759 81
Sewer in Burgess street, from High to Cranston	822 42
Sewer in Congdon street, from Bowen street northerly	990 90
Sewer in Cypress street, from Camp to North Main	944 29
Sewer in Friendship street, from Pearl to Stewart	80
Sewer in Greenwich street, from Warren to Wilson	553 55
Sewer in Greenwich street, from Westfield to Warren	359 70
Sewer in Halsey and Benefit streets	5,962 82
Sewer in Howell and Camp streets	4,023 47
Sewer in Lockwood and Plain streets	22,412 07
Sewer in Manning street, from Thayer to Hope.	1,820 06
Sewer in Peace street, from Broad to Prairie avenue	2,025 92
Sewer in Sheldon street, from Hope to Brook	1,390 91
Sewer in Thayer street, from Williams to John.	306 45
Sewer in Union street, from Worcester street southerly	147 21
Sewer in Vernon street, from Battey street westerly	232 83
Sewer in Warren street, from Fuller to Greenwich	784 17
Sewer in Webster and Ashburton streets	531 04
Sewer in Wilson street, from present terminus to Fuller	948 63
Additional catch-basins	393 18
Catch-basins in Cromwell street	93 43
Catch-basins in Greenwich street	76 51
Contract reservations on completed sewers	598 00
	$65,638 00

For maintenance, ... $25,906 24

Charged as follows:

Cleaning basins and sewers	$13,719 52
Repairing basins and sewers	1,048 72
Cleaning and repairing old drains	1,289 21
Salaries, superintendent and clerks	2,100 00
Barn expenses	1,686 26
Elm street sewer, repairs to outlet	1,657 73
Point street sewer, repairs to outlet	811 90
Horses, wagons, carts, harnesses, etc	1,188 76
Inspection of connections	999 96
Tools	999 30
Care of dumps	281 25
Sundries	75 49
Telephone lines	48 14
	$25,906 24

CHAS. E. CARPENTER,
CLINTON D. SELLEW,
Board of Public Works.

TWELFTH

QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

72316

QUARTER ENDING DECEMBER 31, 1885.

PRINTED BY
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1886

TWELFTH QUARTERLY REPORT

OF THE

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TILDEN FOUNDATIONS.

REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., January 1, 1886.

To THE HONORABLE CITY COUNCIL:

In compliance with the requirements of Chapter 207 of the ordinances, approved February 14, 1883, the Board of Public Works respectfully presents its twelfth quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, and the condition and cost of same for the quarter ending December 31, 1885.

HIGHWAYS.

The intention of the Board to have all important roadways in proper condition before winter was not fulfilled to the letter, notwithstanding great activity in the department, and an unusually mild December.

Nevertheless, the end of the quarter found, on the whole, a very good state of the streets. In addition to repairs, several jobs of curb-setting, gutter-paving and road-building, not thought easy to reach when the October report was made, have been accomplished.

October 27th, the offer of the Rhode Island Granite Works to furnish 51.03 feet of circular curbing, 25-foot radius, delivered on cars in this city, was accepted. Amount, $33.80.

November 6th, the offer of the Chapman Granite Works to furnish, delivered on cars in this city, from 1,600 to

To be Brought to Grade.

Date of order.	
June 19, 1884,	*Benefit street, from south line of the estate of the First Congregational Society to Benevolent street.*
May 21, 1885,	*Westfield street, from a point about 100 feet west of Fuller to Harrison.*

Concreting Sidewalks.

Date of order.	
Oct. 8, 1885,	*Smith street, adjoining new school house estate.*

Surface Drain to be Put In.

No. of Resolution.	Date of approval.	
280.	June 23, 1885,	*At the corner of Cranston and Dexter streets.*

Surface Water to be Removed.

Date of order.	
Oct. 8, 1885,	*Surface water from Broad street to be turned from Early street pond to the brook crossing Colwell street.*

Surface Drain to be Put In.

No. of Resolution.	Date of approval.	
470.	Oct. 21, 1885,	*Fallon avenue, to dispose of surface water on Chalkstone avenue, in vicinity of Academy avenue, provided, release of all claims for damages against the city be first obtained:*—parties owning property on Fallon avenue declined to release the city from claims for damage and report was so made to the city council, October 30, 1885.

The following work was, December 31, 1885, in progress, viz.:

SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.

Dec. 31, 1883, *Dexter street, from Cranston to Cromwell:*—finished except concreting gutters.

June 19, 1884, *Carter street, from Greenwich to the railroad:*—finished to within about 115 feet of railroad, except concreting gutters.

" 26, " *Diman place, from Angell street to Asylum wall:*—gutters to be concreted and sidewalks to be built, otherwise finished.

" " " *Stimson avenue, from Hope street to Angell:*—roadway built from Hope street to Diman place; gutters to be concreted.

Sept. 18, " *Miller street, from Division to Dexter:*—portion from Division to Harrison built, except concreting gutters.

TO BE BROUGHT TO GRADE.

Dec. 27, 1883, *Highway, adjacent to estate of Wanton Durfee and Humphrey Almy, on Dyer and Custom House streets:*—brought to grade except the portion in front of Humphrey Almy estate, which has been delayed to avoid legal and other difficulties.

Oct. 15, 1885, *Sayles street at school house estates:*—portion opposite estate corner Plain and Sayles streets finished.

TO TAKE POSSESSION OF.

Dec. 18, 1884, *Clinton street, from present termination to Plain street:*—obstructions have been removed and street partially brought to grade.

April 16, 1885, *Earle's Lane, now Pleasant street, from North Main street to Camp:*— a portion near North Main street has been brought to grade.

STREET WASHINGS TO BE REMOVED.

No. of Resolution. Date of approval.

542. Nov. 28, 1885. *Woonasquatucket river at Tar bridge:*—the work has been commenced.

OBTRUCTIONS TO BE REMOVED.

Date of order.

Oct. 4, 1883, *Branch avenue, from Smithfield avenue to Douglas avenue:*— obstructions in the way of grading the avenue have been removed so as to make it passable. The line of occupation, in places, encroaches upon the avenue as laid out.

TO BE PUT IN CONDITION SAFE AND CONVENIENT FOR PUBLIC TRAVEL.

April 16, 1885, *Fenner avenue, from Cranston street to Reservoir avenue:*— finished except the removal of obstructions on sidewalk near Depot avenue.

CONCRETING SIDEWALKS.

Aug. 3, 1882, *Julian and Capron streets, adjoining Julian street school house estate:*— portion in Julian street finished.

TO BE FILLED.

July 17, 1884, *Pond opposite works of the Nicholson File Company:*— a small portion of the pond has been filled.

Trees to be Trimmed.

Nov. 19, 1885, *Trees on public highways to be trimmed so as not to obstruct light from electric and street lamps:*—the work has been commenced.

The following work ordered by the Board of Aldermen and City Council had not commenced December 31, 1885, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of order.

Aug. 3, 1882, *Capron street, in front of Julian street school-house estate.*

Oct. 19, " *Potter's avenue, from Broad street to Greenwich.*

Nov. 16, " *Eddy street, from Thurber's avenue to Pavilion avenue.*

Dec. 21, " *Clinton street, from Prairie avenue to Gay street.*

May 7, 1883, *Reservoir Avenue, east side, from Greenwich street to the railroad bridge.*

July 19, " *Chalkstone avenue, from Charles street to Black.*

Nov. 15, " *Wellington street, from East Beacon to Pearl.*

June 26, 1884, *Richmond street, from Ship to Point.*

Sept. 11, " *Doyle avenue, from East avenue to Olney street.*

" 18, " *George street, from Ives to Gano.*

Oct. 16, " *Burnett street, from Greenwich to Public.*

" " " *Daboll street, from Greenwich to Updike.*

" " " *Grove street, from Almy to Tobey.*

" " " *Webster street, from Delhi to Ambrose.*

March 19, 1885,		*Blackstone street, south side, from Plain to Eddy.*
April 16,	"	*Burnside street, from Public to Potter's avenue.*
" "	"	*Peace street, from Broad to Prairie avenue.*
" "	"	*Woodland street, from Park to Holden.*
May 21,	"	*Adelaide avenue, north side, from Elmwood avenue to Melrose street.*
May 21,	"	*Chalkstone avenue, from Douglas to Smith street.*
" "	"	*Clinton street, from Gay to Plain.*
" "	"	*Cushing street, from Prospect to Brook.*
June 4,	"	*Beacon street, from Lockwood to Pearl.*
" "	"	*Creighton street, from Prospect to Brown.*
" 18,	"	*Blackstone street, north side, from Eddy to Culver.*
" "	"	*George street, from Governor to Ives.*
" "	"	*Pekin street, from Chalkstone avenue to Bailey street.*
" "	"	*Public street, from Broad to Greenwich.*
July 16,	"	*Brighton street, from Knight to Vinton.*
" "	"	*Grant street, from Knight to Carpenter.*
" "	"	*Sheldon street, from Brook to Hope.*
Sept. 17,	"	*Pleasant street, from North Main to Camp.*
" "	"	*Vineyard street, from Hawthorne to Carter.*
Oct. 15,	"	*Smith street, from Ruggles to Oakland avenue.*
Nov. 19,	"	*Briggs street, from Ocean to Plain.*
" "	"	*Linden street, from West Clifford to Providence.*
" "	"	*Whitmarsh street, from Broad to Updike.*
Dec. 17,	"	*Hedley street, from Palmer to Shove.*
" "	"	*Ives street, from Pitman to Waterman.*
" "	"	*Laura street, from Melrose to Hamilton.*
" "	"	*Tockwotton street, from Benefit to South Main.*

Obstructions to be Removed.

Date of order.

Sept. 10, 1885, *Governor street, between Wickenden and Tockwotton.*

Abate Nuisance on.

No. of Resolution. Date of approval.

218. May 20, 1882, *Mitchell street, caused by overflow of surface water.*

Paved with Granite Blocks.

332. July 5, 1884, *Richmond street, from Ship to Point.*

85. Mar. 6, 1885, *Market square and College street, portions of.*

502. Nov. 7, 1885, *Dorrance street, from Westminster to Exchange place.*

To be Brought to Grade.

517. Oct. 28, 1884, *Bucklin street, from Carter to Earl.*

Date of order.

June 18, 1885, *Austin street, from Potter's avenue to Public street.*

" " " *Hamilton street, from Potter's avenue to Adelaide avenue.*

Dec. 1, " *Jackson avenue, adjacent to the estates of Eugene Daily and wife, and Sarah Cusick when the houses shall have been raised.*

To Take Possession of.

Date of order.

April 16, 1885. *Gordon avenue, from Public to Colfax street.*

Fence to be Set Back.

No. of Resolution. Date of approval.

522. Nov. 17, 1885, *West Friendship street, west side, near Greenwich street.*

The amount of bills approved on account of highways, from October 1 to December 31, 1885, inclusive, was $41,454 49

Classified as follows:

Cleaning streets	$3,986 45	
Repairs on unpaved streets	9,981 93	
Repairs on paved streets	106 11	
Crushed stone, materials and labor	6,302 74	
Stone, paving and crosswalk	1,559 81	
Barn expenses	1,125 88	
Salaries—superintendent, clerks and inspectors	998 09	
Blacksmith and wheelwright shop	703 80	
Tools, implements, etc	378 32	
Repairs on stone crushers	262 43	
Labor on materials	191 54	
Watchman at city yard	182 25	
Steam rollers, repairs and supplies	171 42	
Sundries	69 93	
Harness shop, materials and labor	54 10	
Horses, wagons, carts, harnesses, etc	30 00	
Office expenses, city yard	9 72	
Fencing streets, materials and labor	8 50	
Telephone lines	3 05	
Amount carried forward		$26,126 07

Amount brought forward.....		$26,126 07
New Work—Building and Re-building Streets.		
Sidewalks Curbed and Gutters Paved.		
Bond, from Atwell's avenue to Federal.....	$257 38	
Carter, from Greenwich street to railroad.....	1,260 48	
Davis, west side, from Common to Orms.....	73 66	
Dexter, from Cranston to Cromwell.....	2,142 78	
Diman place, from Angell street to Asylum wall	628 56	
Elmwood avenue, from Adelaide avenue, southerly 560 feet.....	1,209 51	
Fenner avenue, adjoining estate of O. Burchard and Harriet A. Swarts.....	25 78	
Fremont, from Governor to Ives.....	909 11	
Greenwich street and Elmwood avenue.....	57 80	
Manning, from Hope to Thayer.....	1,484 68	
Miller, from Dexter to Division.....	518 87	
Stimson avenue, from Hope to Angell.....	1,195 00	
Warren, from Fuller to Dexter.....	141 36	
To be Repaired.		
Dorrance, Pine and Eddy streets, in the immediate vicinity of the estate of the Freemasons' Hall Company.....	47 83	
Peck and Friendship streets, in the immediate vicinity of the estate of Charles D. W. and Henrietta M. K. Brownell.....	31 48	
Take Possession of.		
Clinton street, from present termination to Plain	16 53	
Earle's lane (now Pleasant street), from North Main to Camp.....	453 19	
Put in Condition Safe for Public Travel.		
Fenner avenue, from Cranston street to Reservoir avenue.....	2,611 68	
To be Brought to Grade.		
Benefit street, east side, from south line of estate of the First Congregational Society to Benevolent street.....	73 39	
Sayles street, in the vicinity of the school house estates.....	483 42	
Amounts carried forward.....	$13,622 44	$26,126 07

Amounts brought forward	$13,622 44	$26,126 07
SURFACE DRAIN TO BE PUT IN.		
Dexter street, at corner of Cranston	390 59	
CURBING SET, GUTTERS PAVED, AND SIDEWALKS CONCRETED.		
America street and Atwell's avenue, adjoining lot occupied by fire station and evening school	69 60	
CURBING RESET AND GUTTERS REPAVED.		
Waterman, from Brown to Brook	370 08	
TURN SURFACE WATER FROM "EARLY STREET POND."		
Broad, at Early street	875 71	
		15,328 42
		$41,454 49

Bills deposited with the city treasurer for collection, from October 1 to December 31, 1885, inclusive, amounted to . . . $689 58

As follows:

Street sweepings	$313 14
Labor and materials	271 94
Manure from barn	64 50
Chopping blocks	27 00
Use of steam roller	13 00
	$689 58

During the quarter, coupons from bills collected have been returned by the city treasurer, and receipted for amounting to . . $2,294 95

As follows:

Labor and materials	$1,385 13
Street sweepings	721 69
Manure from barn	145 13
Chopping blocks	30 00
Use of steam roller	13 00
	$2,294 95

The amount of expenditures on account of sidewalks and curbing from October 1 to December 31, 1885, inclusive, was $1,285.76.

Sidewalk and curbing bills deposited with the city treasurer for collection, from October 1 to December 31, 1885, inclusive, amounted to $238.01.

During the quarter, coupons from sidewalk and curbing bills collected have been returned by the city treasurer, and receipted for, amounting to $3,812.82.

WATER WORKS.

The Board has little to say in this report on the subject of purification of the Pawtuxet river. The remaining sources of pollution, few in number, must necessarily continue till spring fairly opens. In the line of purification, as also for more economy of labor and better control of the water supply, the Board had planned, last fall, to connect the Corliss engine pump-well at Pettaconset with the settling basin from which the Cornish engine is supplied.

Materials and tools were placed at the river bank early in October, and on the 16th of that month the Cornish engine was started, mainly to keep the water of the settling basin at a low level during the progress of the work. On the 19th, by the slipping out of a small but important key, the air-pump rod was broken, and its connections with the main beam were bent. A new rod and new connections were substituted for the damaged pieces, but winter came before the engine was ready to work. The job of connecting the pump-well with the basin was, therefore, postponed until the winter shall be past.

The Cornish engine was again started, December 10th, and was steadily working at the end of the quarter.

The contract under which the Corliss engine and house were erected did not include a coal-house, but four openings were left in the fire-room wall, whereby to enter such a house whenever built. The unfinished appearance of the establishment, and the fact that all the coal consumed there had to be wheeled in from a pile in front of the fire-room door, in all kinds of weather, decided the Board to put up a coal-house without further delay. To get sufficient area on a level with the fire-room floor, nearly eleven hundred yards of earth were removed from a bank some twenty-five feet high. The building, practically finished December 31st, is forty-six and one-half feet long, thirty feet wide, and seventeen and one-half feet high. It is quite in keeping with the engine-house as to style and materials, and will hold, without much piling, a hundred tons of coal. The cost of this house, including the removal of earth for its site and the paved floor covered with asphalt, is about twenty-six hundred dollars.

October 17, the offer of Thomas Phillips & Co. to furnish five hundred pounds pure pipe tin, delivered at wharf occupied by the city foot of Point street, was accepted. Amount, $110.00.

November 7, the offer of John W. Briggs and F. H. Peabody & Son to do the mason and carpenter work of a coal-house at the Corliss engine station, Pettaconset, were accepted. Amount, $2,046.00.

November 21, the offer of Thomas Phillips & Co. to furnish two tons of "Anchor brand" pig lead, delivered at city wharf, was accepted. Amount, $186.00.

December 21, the offer of E. D. Smith & Sons to cover the pavement in the new coal-house at Pettaconset with asphaltic top-dressing, was accepted. Amount, $116.35.

During the quarter ending December 31, 1885, water pipes were laid as follows, viz.:

8-INCH.

In Chalkstone avenue, Hartford road Johnston, Irving street, Roger Williams and Smithfield avenues, ...	2,436.8 feet.

6-INCH.

In Abbott, Alphonso, Asia, Blundell, Burrows, Canton, Ceylon, Cushing, Evergreen, Glenham, Grandview, Ivy, O'Neil, Pleasant, Sayles and Read streets; in Narragansett avenue and in Brown and Laban streets Johnston, ...	7,191.6 feet.
Total, ...	9,628.4 feet,

or, 1.8236 miles.

Statement of sizes and lengths of pipes laid since the commencement of the work:

36-inch	10,084	feet.
30-inch	59,637	feet.
24-inch	23,942	feet.
20-inch	6,854.8	feet.
16-inch	31,574	feet.
12-inch	56,853.6	feet.
10-inch	14,758.1	feet.
8-inch	141,597.95	feet.
6-inch	654,226 27	feet.
Total	999,527.72	feet,

or, 189.3045 miles.

Six fire hydrants have been set during the last quarter, one in each of the following locations:

Brown street, Johnston, east side, opposite north line of Jackson street.
Brown street, Johnston, east side, opposite north line of Alverson street.
Burrows street, east side, 322 feet south of Roger Williams avenue.
Chalkstone avenue, north side, 486 feet east of Manton avenue.
Pleasant street, northwest corner of second gangway west of Padelford street.
Smithfield avenue, northeast corner of Comstock street.

The total number of fire hydrants is now twelve hundred and forty-four; twelve hundred and thirty-four flush, and ten post hydrants.

The work of laying the following water pipes, completing the list ordered by the city council, had not commenced December 31, 1885, viz.:

No. of Resolution.	Date of approval.	
324.	June 18, 1885,	*Clinton street, between Gay and Staniford.*
537.	Nov. 28, "	*Arlington street, from Humboldt avenue northerly.*
537.	" " "	*Taber avenue, from Humboldt avenue southerly.*
539.	" " "	*Nolan street, from Bernon northwesterly.*
540.	" " "	*Winsor street, Johnston, from present end of pipe to Plainfield.*

The average daily consumption of water during the last quarter was 4,427,603 gallons.

During the quarter ending December 31, 1885, one hundred and eighty water meters were set, of which number fifty-one were to replace condemned meters. The use of three meters was discontinued. The following meters were in use at the close of the quarter:

KIND.	SIZE.							Total.
	½ in.	¾ in.	1 in.	1½ in.	2 in.	3 in.	4 in.	
Ball & Fitts, Piston	2,872	552	131	47	7	.....	.....	3,609
Ball & Fitts, Rotary	1	.....	22	27	3	7	3	63
Crown	2,157	308	103	32	12	3	3	2,678
Fales, Jenks & Sons	95	81	7	1	2	.....	1	187
Worthington	108	1	.....	.....	1	.....	1	111
	5,233	1,002	263	107	25	10	8	6,648

Seven hundred and seventy-three permits to do plumbing were issued during the quarter.

One hundred and forty-four applications for water were made during the quarter, making the total number, December 31, 1885, thirteen thousand three hundred and ninety.

The number of new service stops opened during the quarter was one hundred and forty-seven.

The total number of service stops opened to December 31, 1885, inclusive, was twelve thousand seven hundred and seventeen. The number in actual use December 31, 1885, was eleven thousand nine hundred and eighty-nine.

The following table exhibits the number of service stops opened by months from the commencement to December 31, 1885:

Mos.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Jan...	.....	54	33	21	34	55	15	49	9	20	7	17	15	21	17
Feb...	.....	47	18	18	7	25	23	18	9	19	3	11	9	10	7
March	.....	38	34	63	7	45	32	60	19	46	23	39	11	28	9
April.	.....	109	109	108	32	108	82	78	52	58	55	49	55	62	48
May..	.....	224	206	147	162	168	136	95	80	84	66	72	78	62	62
June..	.....	329	295	151	172	148	114	103	71	109	82	48	64	81	81
July..	.....	333	261	127	141	158	83	80	49	75	56	77	66	76	77
Aug..	.....	224	209	123	83	94	91	51	51	39	58	87	69	61	57
Sept..	.....	184	147	139	101	94	80	63	44	37	60	67	93	50	70
Oct...	.....	138	135	160	92	84	81	78	79	48	61	56	47	65	62
Nov..	.....	100	104	185	86	54	73	57	63	54	37	64	49	51	39
Dec...	56	83	45	122	60	35	55	45	47	29	40	27	56	44	46
	56	1,863	1,596	1,364	977	1,068	865	777	573	618	548	614	612	611	575

The following is a statement of receipts for water, by months, from commencement to December 31, 1885, inclusive:

MONTHS.	1872.	1873.	1874.	1875.	1876.	1877.	1878.
January..	.....	$40,699 09	$69,356 70	$92,102 10	$106,847 71	$124,146 05	$141,006 51
February	$796 06	4,314 80	3,678 96	4,674 19	2,939 71	5,592 98	5,166 46
March....	6,671 82	6.669 73	9,221 19	4,777 42	6,777 07	9,455 64	4,318 92
April....	1,668 59	2,810 07	4,936 98	10,093 32	13,384 63	7,722 51	14,965 74
May.....	2,063 41	1,766 28	2,338 59	2,574 92	2,598 33	3,307 32	2,787 37
June	8,634 89	8,228 92	2,583 35	8,140 99	6,506 75	8,840 60	4,207 37
July.....	3,488 27	6,214 24	13,756 51	9,035 23	14,055 90	9,350 82	14,758 89
August...	1,818 14	1,441 09	1,953 37	4,001 66	2,324 74	3,295 95	2,872 26
Sept'mb'r	4,933 44	7,550 64	5,541 34	5,393 34	13,053 49	3,313 36	7,457 55
October..	5,079 08	8,745 53	9,097 95	13,578 46	8,623 85	15,865 02	15,335 95
Novemb'r	477 04	872 83	1,511 03	1,291 59	908 43	1,050 65	900 39
Decemb'r	5,372 77	8,072 87	8,076 42	9,481 49	5,848 12	8,098 49	5,105 92
	$41,003 51	$97,386 09	$132,052 39	$165,144 71	$183,868 73	$200,039 39	$218,883 33

MONTHS.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
January..	$147,888 06	$160,370 27	$170,104 89	$175,829 02	$191,367 40	$202,036 39	$211,483 46
February	3,921 14	3,475 86	3,663 06	3,909 62	3,716 15	3,590 27	2,100 20
March....	4,704 11	6,060 68	5,505 89	11,112 73	1,220 34	9,634 66	6,923 69
April....	15,146 37	14,045 15	13,844 44	12,683 36	22,891 51	16,874 06	18,336 08
May.....	1,957 18	2,172 65	2,688 74	1,987 79	2,143 14	2,835 52	2,697 08
June.....	3,638 09	6,597 05	11.262 59	2,049 18	7,870 41	2,107 71	2,414 41
July.....	14,351 48	15,613 89	12,495 48	20.268 23	15,097 13	24,908 37	22,906 49
August...	5,194 44	2,591 49	2,268 76	3,369 84	2,154 16	2,430 76	2,928 45
Sept'mb'r	6,129 36	5,794 60	1,353 16	1,410 30	1,407 65	1,560 84	4,299 48
October..	17,794 01	20,094 65	23,654 63	14,100 56	20,313 15	24,387 05	23,779 98
Novemb'r	893 68	2,085 68	2,874 33	16,367 91	7,983 51	2,598 33	2,535 46
Decemb'r	7,933 86	8,753 09	10,814 90	6,230 23	7,468 34	9,404 40	13,066 43
	$229,551 78	$247,705 06	$260,530 87	$269,318 77	$283,632 89	$302,368 36	$313,561 21

The amount of bills approved on account of water works, from October 1 to December 31, 1885, inclusive, was

For construction and extension, . . $15,896 41

Classified as follows:

Cast iron water pipes	$6,852 28
Prevention of deflement of the Pawtuxet	2,968 00
Coal-house, Pettaconset	2,256 73
Laying water pipes	1,625 78
Laying service pipes	770 20
Special castings	470 60
Stop valves	285 00
Connecting Corliss engine, Pettaconset, with basin	240 82
Barn expenses	238 95
Labor on and carting pipes	93 10
Wharf salaries	75 00
Tools	19 95
	$15,896 41

For maintenance, ... $16,188 18

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$1,036 05	
Cornish pumping engine	994 79	
Sundries	558 40	
Engineers	400 00	
Firemen	300 62	
Superintendence	166 66	
Oil, waste and packing	124 11	
Real estate	67 31	
Corliss pumping engine and house	63 52	
Labor on fuel	57 66	
Barn expenses	27 41	
Care of grounds	25 95	
Worthington pumping engine	2 84	
Amount carried forward		$3,825 26

Amount brought forward		$3,825 26
Sockanosset Reservoir.		
Watchman	$91 50	
Care of reservoir, grounds, gate houses, etc.	9 40	
		100 90
Hope Pumping Station.		
Engineers	$533 34	
Firemen	240 00	
Coal and wood	396 27	
Care of grounds	102 03	
Oil, waste and packing	62 30	
Sundries	27 06	
Pumping engine, No. 1, (Corliss)	13 65	
Pumping engine, No. 2, (Nagle)	10 96	
		1,385 61
Hope Reservoir.		
Watchman	$153 18	
Care of reservoir, gate house, etc.	84	
		154 02
Pipe line and Service stops.		
Repairs	$662 83	
Superintendence, salaries.	400 00	
		1,062 83
Meter Department.		
Water meters	$2,773 32	
Setting and repairing meters	747 98	
		3,521 30
Miscellaneous.		
Clerks' and inspectors' salaries	$1,349 98	
Town of Cranston, tax	4,300 00	
Superintendent's clerks	200 00	
Barn expenses	68 80	
Public drinking fountains and troughs	45 87	
Horse hire	41 66	
Real estate at Pawtuxet	30 87	
Horse and wagon account	29 15	
Amounts carried forward	$6,066 33	$10,049 92

Amounts brought forward	$6,066 33	$10,049 92
Sundries	26 68	
Real estate in Lincoln, tax	14 77	
Telephone lines	14 38	
Pipe yard office expenses	11 60	
Analyses of water	3 00	
Buildings at pipe yard	1 50	
		6,138 26
		$16,188 18

The amount of expenditures from October 1 to December 31, 1885, inclusive, was . $32,084 59

The total expenditure to December 31, 1885, inclusive, was $6,234,672 27

The *net* expenditure for construction and extension from October 1 to December 31, 1885, inclusive, was	$14,244 04
The *net* expenditure for construction and extension to December 31, 1885, inclusive, was	5,043,286 67
The *net* expenditure for maintenance from October 1 to December 31, 1885, inclusive, was	9,776 77
The *net* expenditure for maintenance to December 31, 1885, inclusive, was	691,479 87

Bills deposited with the city treasurer for collection, from October 1 to December 31, 1885, inclusive, amounted to . . . $32,199 39

As follows:

Water	$26,672 05
Water meters	3,797 25
Setting and repairing meters	1,126 22
Rent of real estate	228 02
Permanently closing service stops	55 00
Penalties	18 00
Repairing services, etc	14 15
Horse cover (damaged)	2 50
Labor and materials, laying service pipes	129 51
Labor and materials, laying private fire supplies	91 21
Cast-iron water pipes	62 98
Jute yarn	2 50
	$32,199 39

During the quarter, coupons from bills collected have been returned by the city treasurer, and receipted for, amounting to . . $51,377 88

As follows:

Water	$43,681 35
Water meters	4,713 35
Setting and repairing meters	1,322 45
Rent of real estate	280 11
Permanently closing service stops	60 00
Penalties	38 00
Repairing services, etc	33 00
Horse cover (damaged)	2 50
Labor and materials, laying private fire supplies	279 28
Labor and materials, laying service pipes	196 12
Cast-iron water pipe	769 22
Jute yarn	2 50
	$51,377 88

SEWERS.

October 30th, the offer of Goff & White to furnish 300 feet of twelve-inch straight pipe, and 582 feet of twelve-inch by six-inch branches, delivered on wharf occupied by the city, foot of Point street, was accepted. Amount, $527.40.

November 18th, the offer of Goff & White to furnish 1,000 feet of twelve-inch straight pipes; 400 feet of twelve-inch by six-inch branches; 45 feet of twelve-inch by eight-inch branches, and 20 twelve-inch bends, delivered on city wharf, was accepted. Amount, $752.90.

During the quarter, one hundred and fifty-three permits were issued to drain-layers; ninety-three for new work, and sixty for extension and repair of drains.

One drain-layer's license was issued during the quarter, making the total number twenty-three, all of which expired December 31, 1885.

October 26th, contracts for the construction of sewers, which have since been signed, were awarded as follows, viz.:

[The amounts given below are what it is estimated will be paid the contractors for labor, and does not include cost of inspection and materials, or rock excavation, for which the contracts and specifications provide a price per cubic yard.]

To John Keogh.

No. of Resolution.	Date of approval.		
436.	Sept. 25, 1885,	*Spring street from High to Pond,* . . .	$328 30

To James J. Newman.

411.	Sept. 24, 1885,	*Vernon street, from present sewer to Vinton street,*	$483 00
446.	Oct. 8, "	*Spring street, from Broad to Lockwood,* . .	842 55

November 25th, contracts for the construction of sewers, which have since been signed, were awarded as follows, viz.:

To James J. Newman.

529.	Nov. 19, 1885,	*Pine street, from Broad to Linden,* . . .	$927 20
530.	" " "	*Point street, from Beacon to Prairie avenue,* . .	520 10

To John Keogh.

508.	Nov. 7, 1885,	*Prospect street, from Hidden to Olney,* . .	317 00

During the last quarter the work of constructing sewers has been completed in the following streets:

No. of Resolution.	Date of approval.	
408.	Sept. 8, 1884,	*Webster and Ashburton, from Delhi to Martin.*
609.	Jan. 2, 1885,	*Lockwood and Plain, from Broad to Dudley.*
302.	July 8, "	*Howell and Camp, from East avenue to Lippitt.*
306.	" " "	*Thayer, from Williams to John.*
332.	" 18, "	*Clinton from Prairie avenue to Plain.*
368.	Sept. 10, "	*Kenyon, from America to Federal.*
369.	" " "	*Summer, from Broad to Conduit.*
396.	" 12, "	*Cushing, from Brook to Thayer.*
397.	" " "	*Abbott, from Knowles to North Main.*
398.	" " "	*West Clifford, from Dudley to Pearl.*
411.	" 24, "	*Vernon, from present sewer to Vinton.*
436.	" 25, "	*Spring, from High to Pond.*
446.	Oct. 8, "	*Spring, from Broad to Lockwood.*

Catch basins have been constructed as follows:

Four at junction of Cranston and Dexter streets and two extra inlets.
One with four inlets at junction of Friendship and Potter streets.
One with two inlets at junction of Friendship and Page streets.
One with one inlet at junction of Friendship and Eddy streets.
One with two inlets at junction of Friendship and Hay streets.

Work upon the following sewers, completing the list ordered by the City Council, had not commenced December 31, 1885, viz.:

No. of Resolution.	Date of approval.	
397.	Oct. 7, 1882,	*Orms street, from Carroll to present end of sewer in Orms.*
601.	Jan. 2, 1885,	*Oriental and Oregon streets, from Admiral to Borva, thence across land of the Providence and Worcester Railroad Co. to Ashburton.*

294.	July 8,	1885,	*Pleasant street, from Camp to North Main.*
508.	Nov. 7,	"	*Prospect street, from Hidden to Olney.*
529.	" 19,	"	*Pine street, from Broad to Linden.*
530.	" "	"	*Point street, from Beacon to Prairie aveuue.*

Bills approved on account of sewers from October 1 to December 31, 1885, inclusive, amounted to

For construction, ... $29,555.81

Charged as follows :—

Materials	$625 95
Clerk's salary	75 00
Tools	17 18
Sewer in Abbott street, from Knowles to North Main	1,785 31
Sewer in Burgess street, from High to Cranston	9 00
Sewer in Clinton street, from Prairie ave. to Plain	2,587 29
Sewer in Congdon street, from Bowen street, northerly	3 60
Sewer in Cushing street, from Brook to Thayer	494 67
Sewer in Halsey and Benefit streets	22 50
Sewer in Howell and Camp streets	18 20
Sewer in Kenyon street, from America to Federal	1,599 29
Sewer in Lockwood and Plain streets	11,360 70
Sewer in Spring street, from Broad to Lockwood	912 30
Sewer in Spring street, from High to Pond	367 95
Sewer in Summer street, from Broad to Conduit	462 66
Sewer in Thayer street, from Williams to John	7 90
Sewer in Union street, from Worcester street, southerly	1 80
Sewer in Vernon street, from present end of sewer to Vinton street	491 58
Sewer in Webster and Ashburton streets	6,912 63
Sewer in West Clifford street, from Dudley to Pearl	1,381 02
Catch basin in Dexter street	23 10
Additional catch basins	202 18
Contract reservations on completed sewers	194 00
	$29,555 81

For maintenance, ... $4,030 88

Charged as follows :—

Cleaning basins and sewers	$2,394 59	
Repairing basins and sewers	154 92	
Cleaning and repairing old drains	184 05	
Barn expenses	443 36	
Salaries,—superintendent, clerks and inspectors	516 66	
Tools	154 84	
Horses, wagons, carts, harnesses, etc	92 92	
Care of dumps	37 50	
Sundries	27 54	
Telephone lines	24 50	
	$4,030 88	

The *net* expenditure for construction of sewers to December 31, 1885, inclusive, was	$1,742,807 12
The *net* expenditure for maintenance of sewers to December 31, 1885, inclusive, was	203,016 99

Bills deposited with City Treasurer for collection from October 1 to December 31, 1885, inclusive, amounted to $179 72

As follows :—

Cleaning private drains, etc	$70 85
Use of pump	22 50
Filling cisterns	4 00
Old material	2 00
Private drains laid in streets	34 92
Use of pump	30 50
Materials	14 95
	$179 72

During the quarter coupons from bills collected have been returned by the City Treasurer, and receipted for, amounting to . . . $245 20

As follows :—

Cleaning private drains, etc	$111 28
Filing cisterns, boilers, etc	33 00
Use of pump	24 50
Old material	2 00
Private drains laid in streets	34 92
Use of pump	30 50
Materials	9 00
	$245 20

CHAS E. CARPENTER,
CLINTON D. SELLEW,

Board of Public Works.

1886.] CITY DOCUMENT. [No. 20.

P 72317

THIRTEENTH QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING MARCH 31, 1886.

PROVIDENCE:
PROVIDENCE PRESS COMPANY, PRINTERS TO THE CITY.
1886.

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P 72317
ASTOR, LENOX AND
TILDEN FOUNDATIONS.
19 J.

ORGANIZATION OF THE BOARD OF PUBLIC WORKS.

CHARLES E. CARPENTER, *President.*

CLINTON D. SELLEW, *Secretary.*

CHARLES H. HUNT.

OFFICES, CITY HALL.

REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., JULY 1, 1886.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 207 of the ordinances, approved February 14, 1883, the Board of Public Works respectfully presents its fourteenth quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, and the condition and the cost of same for the quarter ending June 30, 1886.

HIGHWAYS.

April 14th, an offer of E. D. Smith & Sons to repair the pavement on Weybosset and Custom House streets for the sum of sixty-eight cents per yard, and keep the work in good order for one year, was accepted.

April 29th, the proposal of Booth Brothers to furnish 5,000 feet of straight and 500 feet of circular curbing was accepted, and a contract subsequently executed. Amount, $3,075.00.

June 28th, proposals for paving Market square and a part of College street were opened, and subsequently that of C. W. Blakeslee & Sons was accepted and contract signed. Amount, $11,624.68.

Ten permits to open streets were issued during the quarter.

During the last quarter, portions of the following streets have been repaired:

Abbott,	Eagle,	North,
Angell,	Farthing,	Nichols,
Bacon,	Gilmore,	North Main,
Branch avenue,	Governor,	Pitman,
Bridgham,	Greenwich,	Plain,
Broad,	Harrison,	Power,
Brook,	Harris avenue,	Prince,
Candace,	Hopkins,	Richmond,
Cent,	Howland,	Smithfield avenue,
Conduit,	Ives,	Superior,
Congdon,	Jenkins,	South Main,
Delaine,	Julian,	Valley,
Diamond,	Linard,	Waterman,
Dover,	Messer,	Wilson.
Dyer,		

During the quarter ending June 30, 1886, the following work was completed, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of order.

Dec. 21, 1882, *Clinton street, from Prairie avenue to Gay street.*

Nov. 15, 1883, *Wellington street, from East Beacon to Pearl.*

Sept. 18, 1884, *Miller street, from Division to Dexter.*

May 21, 1885, *Clinton street, from Gay to Plain.*

No. of resolution. Date of approval.

230. May 24, 1886, *Borden street, opposite 5th Police Station.*

Sidewalks to be Concreted.

No. of resolution. Date of approval.

183. May 5, 1886, *Atwell's avenue, north side, from railroad bridge to Harris avenue.*

" " 5, 1886, *Atwell's avenue, south side, from Knight street to Harris avenue.*

To be Repaired.

Date of order.

April 15, 1886, *Bullion street, from South Water street to a point about 40 feet westerly.*

To take Possession of.

Date of order.

Dec. 18, 1884, *Clinton street, from present termination to Plain street.*

To be put in Condition Safe and Convenient for Public Travel.

April 16, 1885, *Fenner avenue, from Cranston street to Reservoir avenue.*

To be Brought to Grade.

No. of resolution. Date of approval.

27. Jan. 6, 1886, *Fenner avenue, abutting on estate of Peter Gavigan.*

Fence to be Set Back.

No. of resolution. Date of approval.

522. Nov. 17, 1885, *West Friendship street, west side, near Greenwich street.*

The following work was, June 30, 1886, in progress, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of order.

May 7, 1883, *Reservoir avenue, east side, from Greenwich street to the railroad bridge*:—work nearly completed except concreting gutters.

Date of order.

Dec. 31, 1883, *Dexter street, from Cranston to Cromwell:*—finished except concreting gutters.

June 19, 1884, *Carter street, from Greenwich to the railroad:*— finished to within about 115 feet of railroad, except concreting gutters.

" 26, " *Diman place, from Angell street to Asylum wall:*—finished except concreting gutters.

" " " *Stimson avenue, from Hope street to Angell:*—finished except concreting gutters.

Sept. 11, " *Doyle avenue, from East avenue to Olney street:*—partially completed.

To be Brought to Grade.

Dec. 27, 1883, *Highway, adjacent to estate of Wanton Durfee and Humphrey Almy, on Dyer and Custom House streets:*— brought to grade except the portion in front of Humphrey Almy estate, which has been delayed to avoid legal and other difficulties.

Oct. 15, 1885, *Sayles street at school house estates:*—portion opposite estate corner Plain and Sayles streets finished.

Dec. 1, " *Jackson avenue, adjacent to the estates of Eugene Dailey and wife, and Sarah Cusick, and fill in around the houses when they shall have been raised:*—the Dailey estate and a portion of the Cusick estate have been brought to grade.

To be Repaired.

No. of resolution. Date of approval.

125. March 30, 1886, *West Friendship street, cobble pavement to be removed and roadway macadamized:*—finished except concreting gutters.

To take Possession of.

Date of order.

April 16, 1885, *Earle's lane, now Pleasant street, from North Main street to Camp:*— a portion near North Main street has been brought to grade.

Obstructions to be Removed.

Oct. 4, 1883, *Branch avenue, from Smithfield avenue to Douglas avenue:*— obstructions in the way of grading the avenue have been removed so as to make it passable. The line of occupation, in places, encroaches upon the avenue as laid out.

Concreting Sidewalks.

Aug. 3, 1882, *Julian and Capron streets, adjoining Julian street school house estate:*— portion in Julian street finished.

To be Filled.

July 17, 1884, *Pond opposite works of the Nicholson File Company:*— a small portion of the pond has been filled.

The following work ordered by the Board of Aldermen and City Council had not commenced June 30, 1886, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of order.

Aug. 3, 1882, *Capron street, in front of Julian street school-house estate.*

Oct. 19, " *Potter's avenue, from Broad street to Greenwich.*

Date of order.	
Nov. 16, 1882,	*Eddy street, from Thurber's avenue to Pavilion avenue.*
July 19, 1883,	*Chalkstone avenue, from Charles street to Black.*
June 26, 1884,	*Richmond street, from Ship to Point.*
Sept. 18, "	*George street, from Ives to Gano.*
Oct. 16, "	*Burnett street, from Greenwich to Public.*
" " "	*Daboll street, from Greenwich to Updike.*
" " "	*Grove street, from Almy to Tobey.*
" " "	*Webster street, from Delhi to Ambrose.*
March 19, 1885,	*Blackstone street, south side, from Plain to Eddy.*
April 16, "	*Burnside street, from Public to Potter's avenue.*
" " "	*Peace street, from Broad to Prairie avenue.*
" " "	*Woodland street, from Park to Holden.*
May 21, "	*Adelaide avenue, north side, from Elmwood avenue to Melrose street.*
" " "	*Chalkstone avenue, from Douglas to Smith street.*
" " "	*Cushing street, from Prospect to Brook.*
June 4, "	*Beacon street, from Lockwood to Pearl.*
" " "	*Creighton street, from Prospect to Brown.*
" 18, "	*Blackstone street, north side, from Eddy to Culver.*
" " "	*George street, from Governor to Ives.*
" " "	*Pekin street, from Chalkstone avenue to Bailey street.*
" " "	*Public street, from Broad to Greenwich.*
July 16, "	*Brighton street, from Knight to Vinton.*
" " "	*Grant street, from Knight to Carpenter.*
" " "	*Sheldon street, from Brook to Hope.*
Sept. 17, "	*Pleasant street, from North Main to Camp.*
" " "	*Vineyard street, from Hawthorne to Carter.*

Date of order.		
Oct. 15,	1885,	*Smith street, from Ruggles to Oakland avenue.*
Nov. 19,	"	*Briggs street, from Ocean to Plain.*
" "	"	*Linden street, from West Clifford to Providence.*
" "	"	*Whitmarsh street, from Broad to Updike.*
Dec. 17,	"	*Hedley street, from Palmer to Shove.*
" "	"	*Ives street, from Pitman to Waterman.*
" "	"	*Laura street, from Melrose to Hamilton.*
" "	"	*Tockwotton street, from Benefit to South Main.*
Jan. 27,	1886,	*Governor street, from Wickenden to Tockwotton.*
April 15,	"	*Wilson street, from Harrison to Dexter.*
May 20,	"	*Adelaide avenue, adjoining estate of William Whitehead.*
June. 17,	"	*Austin street, from Public to Potter's avenue.*
" "	"	*Chalkstone avenue, from Academy to River avenue.*
" "	"	*Cypress street, from Camp to East avenue.*
" "	"	*Hamilton street, from Potter's to Adelaide avenue.*
" "	"	*Sayles street, from Eddy to Plain.*
" "	"	*Violet street, from Orms to Chalkstone avenue.*

SIDEWALKS TO BE CONCRETED.

No. of resolution.	Date of approval.		
85.	Feb. 20,	1886,	*Manton avenue, from Delaine to Pelham street.*
230.	May 24,	"	*Corner of Borden and Plain streets, in front of 5th police station.*
255.	June 16,	"	*Harrison street, in front of engine house.*

Obstructions to be Removed.

Date of order.

Sept. 10, 1885, *Governor street, between Wickenden and Tockwotton.*

Abate Nuisance on.

No. of resolution. Date of approval.

218. May 20, 1882, *Mitchell street, caused by overflow of surface water.*

Paved with Granite Blocks.

332. July 5, 1884, *Richmond street, from Ship to Point.*

85. March 6, 1885, *Market square and College street, portions of.*

502. Nov. 7, " *Dorrance street, from Westminster to Exchange place.*

To be Brought to Grade.

517. Oct. 28, 1884, *Bucklin street, from Carter to Earl.*

Date of order.

June 18, 1885, *Austin street, from Potter's avenue to Public street.*

" " " *Hamilton street, from Potter's to Adelaide avenue.*

To take Possession of.

Date of order.

April 16, 1885, *Gordon avenue, from Public to Colfax street.*

May 6, 1886, *Brown street, from Olive to Barnes.*

" " " *Wickenden street, from Benefit to a point near junction of Bridge and Farthing streets.*

Bills approved on account of highways, from April 1 to June 30, 1886, inclusive, amounted to $54,136 92

Classified as follows:

Repairs on unpaved streets	$14,877 04	
Repairs on paved streets	2,167 36	
Culverts repaired, damaged by storm February 13.	929 83	
Culvert on Butler avenue repaired	1,353 57	
Cleaning streets	9,864 79	
Crushed stone, materials and labor	5,409 48	
Screening gravel	2,503 70	
Barn expenses	1,779 71	
Stone, paving and crosswalk	1,687 10	
Blacksmith and wheelwright shop	1,257 53	
Salaries—superintendent, clerks and inspectors	1,035 67	
Tools, implements, etc	982 77	
Steam rollers, repairs and supplies	734 50	
Labor on materials	478 28	
Horses, wagons, carts, harnesses, etc	456 74	
Repairs on stone crushers	377 50	
Harness shop, materials and labor	278 00	
Watchman at city yard	218 78	
Fencing streets, materials and labor	100 03	
Sundries	93 85	
Horse car tickets	35 90	
Office expenses, city yard	29 76	
Telephone lines	1 75	
		$46,653 64

NEW WORK—BUILDING AND RE-BUILDING STREETS, ETC.

SIDEWALKS CURBED AND GUTTERS PAVED.

Clinton street, from Prairie avenue to Gay street	$1,184 42	
Clinton street, from Gay to Plain	1,188 26	
Diman place, from Angell street to Asylum wall	142 51	
Doyle avenue, from East avenue to Olney street	705 34	
Miller street, from Dexter to Division	294 10	
Amounts carried forward	$3,514 63	$46,653 64

Amounts brought forward	$3,514 63	$46,653 64
Reservoir avenue, east side, from Greenwich street to the railroad bridge	634 97	
Stimson avenue, from Hope to Angell street	1,568 77	
Wellington street, from East Beacon to Pearl	580 52	
TO BE BROUGHT TO GRADE.		
Fenner avenue, abutting on estate of Peter Gavigan.	90 97	
Jackson avenue, adjacent to estates of Eugene Dailey and wife and Sarah Cusick	186 70	
TO BE REPAIRED.		
West Friendship street, cobble pavement to be removed, etc	733 60	
Bullion street, from South Water westerly about 40 feet	100 90	
FENCE TO BE SET BACK.		
West Friendship street, west side, near Greenwich street	72 22	$7,483 28
		$54,136 92

Bills deposited with the city treasurer for collection, from April 1 to June 30, 1886, inclusive, amounted to $384 41

As follows:

Street sweepings	$186 25
Manure from barn	64 50
Labor and materials	52 51
Old rope	54 90
Wheelbarrows	25 00
Chopping blocks, etc.	1 25
	$384 41

During the quarter, coupons from bills collected have been returned by the city treasurer, and receipted for, amounting to . . . $382 68

As follows:

Street sweepings	$197 10
Manure from barn	64 50
Old rope	54 50
Labor and materials	45 33
Rent of pasture on Smith street	20 00
Chopping blocks, etc	1 25
	$382 68

The amount of expenditures on account of sidewalks and curbing, from April 1 to June 30, 1886, inclusive, was $2,348 21

Sidewalks and curbing bills deposited with the city treasurer for collection, from April 1 to June 30, 1886, inclusive, amounted to . $8,934 36

During the quarter, coupons from sidewalks and curbing bills have been returned by the city treasurer, and receipted for, amounting to . $3,171 69

WATER WORKS.

April 20th, a lease of a portion of the mill site at Pawtuxet was executed with Samuel R. Baker for one year from May 1, 1886, at an annual rent of fifty dollars, payable quarterly.

During the quarter ending June 30, 1886, water pipes were laid as follows:

12-INCH.

In Charles street and Chalkstone avenue, 570.3 feet.

8-INCH.

In Admiral, Charles, Hawkins, Irving and Regent streets, and in Taber avenue, . 1,691.8 feet.

6-INCH.

In Ashburton, Bergen, Chad-Brown, Colwell, Eighth, Elk, Erin, Forest, Grand View, Harold, Highland, James, Jessamine, Lawn, Madison, Manning, Ruggles, Seventh, Staniford, Tappan and Whipple streets; in Arlington, Chapin, Chalkstone, Doyle, Harris, Humboldt and Highland avenues, and in Dike and Lexington streets and Rocky Hill avenue, Johnston, . .	8,121.7 feet.
Total, ...	10,383.8 feet,

or, 1.9666 miles.

Statement of sizes and lengths of pipes laid since the commencement of the work:

36-inch	10,084	feet.
30-inch	59,637	feet.
24-inch	23,942	feet.
20-inch	6,854.8	feet.
16-inch	31,574	feet.
12-inch	57,423.9	feet.
10-inch	14,758.1	feet.
8-inch	143,325.25	feet.
6-inch	665,007.67	feet.
Total	1,012,606.72	feet.

or, 191.7816 miles.

Eleven fire hydrants were set during the last quarter, one in each of the following locations:

Arlington avenue, east side, 196 feet south of Humboldt avenue.
Armington street, Cranston, northeast corner of Broad street. (Post.)
Candace street, northeast corner of Bernon street.
Chalkstone avenue, north side, 6 feet west of Clematis street.
Clinton street, north side, 14 feet west of east line of Hilton street.
Harold street, southeast corner of Regent street.
Hartford road, Johnston, south side, 96 feet west of William street.

Hartford road, Johnston, south side, 501 feet west of William street.
Jessamine street, northeast corner of Brattle street.
Staniford street, east side, opposite north line of Pilgrim street.
Taber avenue, southeast corner of Humboldt avenue.

The total number of fire hydrants is now twelve hundred and fifty-five: twelve hundred and forty-four flush and eleven post hydrants.

The work of laying the following water pipes, completing the list ordered by the city council, had not commenced June 30, 1886, viz.:

No. of resolution.	Date of approval.	
537.	Nov. 28, 1885,	*Arlington street, from Humboldt avenue northerly.*
539.	" " "	*Nolan street, from Bernon northwesterly.*

The average daily consumption of water during the last quarter was 4,595,587 gallons.

During the quarter ending June 30, 1886, one hundred and sixty-four water meters were set, of which number forty-five were to replace condemned meters. The use of eight meters was discontinued. The following meters were in use at the close of the quarter:

KIND.	SIZE.							Total.
	⅝ in.	¾ in.	1 in.	1¼ in.	2 in.	3 in.	4 in.	
Ball & Fitts, Piston	2,889	562	133	47	7	.....	.....	3,638
Ball & Fitts, Rotary	1	.....	22	27	3	7	3	63
Crown	2,394	405	111	36	13	3	3	2,965
Fales, Jenks & Sons	69	60	6	1	1	.....	.....	137
Worthington	95	1	.....	.....	1	.....	1	98
	5,448	1,028	272	111	25	10	7	6,901

Three plumbers' licenses were issued during the quarter, making the total number sixty-four, all of which expire December 31, 1886.

Seven hundred and eighty-six permits to do plumbing were issued during the quarter.

Two hundred and four applications for water were made during the quarter, making the total number June 30, 1886, thirteen thousand six hundred and fifty-nine.

The number of new service stops opened during the quarter was one hundred and eighty-eight.

The total number of service stops opened to June 30, 1886, inclusive, was twelve thousand nine hundred and sixty-two. The number in actual use June 30, 1886, was twelve thousand two hundred and forty-seven.

The amount of bills approved on account of water works from April 1 to June 30, 1886, inclusive, was

For construction and extension, . . $18,941 29

Classified as follows:

Fruit Hill reservoir, for land	$8,296 57
Fire hydrants, boxes and covers	3,737 00
Laying water pipes	2,395 70
Special castings	1,031 66
Taps and stops	827 25
Laying service pipes	752 44
Stop valves	712 00
Rent of wharf and pipe yard	625 00
Barn expenses	267 55
Wharf salaries	150 00
Labor on and carting pipes	61 78
Horse and wagon account	31 39
New road to Corliss engine house, Pettaconset	30 45
Tools	22 50
	$18,941 29

For maintenance, ... $15;090 01

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$1,532 56	
Sundries	880 58	
Engineers	600 00	
Firemen	414 10	
Lights	270 24	
Superintendence	249 99	
Cornish pumping engine	222 99	
Oil, waste and packing	221 94	
Care of grounds	55 43	
Corliss pumping engine and house	49 43	
Labor on fuel	48 45	
Barn expenses	33 42	
Real estate	30 04	
Horse and wagon account	2 38	
		$4,611 55

SOCKANOSSET RESERVOIR.

Watchman	$138 00	
Care of reservoir, grounds, gate houses, etc.	105 58	
		243 58

HOPE PUMPING STATION.

Engineers	$800 01	
Care of grounds	416 59	
Firemen	360 00	
Lights	127 20	
Oil, waste and packing	50 42	
Sundries	21 42	
Pumping engine No. 2 (Nagle)	17 04	
		1,792 68

HOPE RESERVOIR.

Watchman	$207 00	
Care of reservoir, gate houses, etc.	7 93	
		214 93

PIPE LINE AND SERVICE STOPS.

Repairs	$497 88	
Superintendence—salaries	616 66	
		1,114 54
Amount carried forward		$7,977 28

Amount brought forward		$7,977 28

METER DEPARTMENT.

Water meters	$2,695 72	
Setting and repairing meters	1,222 82	
		3,918 54

MISCELLANEOUS.

Clerks' and inspectors' salaries	$2,449 98	
Horse and wagon account	336 59	
Real estate at Pawtuxet	112 85	
Public drinking fountains and troughs	77 66	
Sundries	67 54	
Horse hire	62 49	
Barn expenses	44 08	
Telephone lines	24 69	
Pipe yard, office expenses	14 56	
Analyses of water	3 75	
		3,194 19
		$15,090 01

The amount of expenditures from April 1 to June 30, 1886, inclusive, was . . . $34,031 30

The total expenditure to June 30, 1886, inclusive, was $6,298,541 95

The *net* expenditure for construction and extension from April 1 to June 30, 1886, inclusive, was	$18,403 62
The *net* expenditure for construction and extension to June 30, 1886, inclusive, was	5,076,219 98
The *net* expenditure for maintenance from April 1 to June 30, 1886, inclusive, was	11,528 02
The *net* expenditure for maintenance to June 30, 1886, inclusive, was	715,230 19

Bills deposited with the city treasurer for collection from April 1 to June 30, 1886, inclusive, amounted to $32,058 58

As follows:

Water	$26,007 57
Water meters	3,395 90
Setting and repairing meters	1,386 93
Rent of real estate	278 02
Grass from Hope reservoir	150 00
Permanently closing service stops	35 00
Penalties	20 00
Repairing services, etc	2 50
Labor and materials, laying service pipes	259 87
Labor and materials, laying private fire supplies	345 43
Cast iron water pipe	150 62
Manure from barn	22 00
Special castings	4 74
	$32,058 58

During the quarter, coupons from bills collected have been returned by the city treasurer, and receipted for, amounting to . . . $34,645 64

Water	$30,527 98
Water meters	2,768 00
Setting and repairing meters	631 47
Rent of real estate	135 52
Permanently closing service stops	25 00
Penalties	18 00
Repairing services, etc	2 00
Labor and materials, laying service pipes	230 23
Labor and materials, laying private fire supplies	130 17
Cast iron water pipes	150 62
Manure from barn	22 00
Special castings	4 50
Jute yarn	15
	$34,645 64

SEWERS.

June 28th, the offer of Manchester & Hudson to furnish 250,000 hard-body bricks, delivered on wharf foot of Point street, for the sum of eight $\frac{25}{100}$ (8.25) dollars, was accepted.

April 7th, the offer of James J. Newman to construct about 250 feet of 12-inch pipe sewer in Myrtle street, between Pine and Broad streets, was accepted.

Seven drain-layers' licenses were issued during the quarter, making the total number twenty-five, all of which expire December 31, 1886.

During the quarter one hundred and eighty-three permits were issued drain layers; one hundred and thirty-four for new work, and forty-nine for extension and repair of drains.

May 28th, a contract for the construction of sewer, which has since been signed, was awarded as follows, viz.:

[The amounts given below are what is estimated will be paid the contractors for labor, and does not include cost of inspection and materials, or rock excavation, for which the contracts and specifications provide a price per cubic yard.]

To Seth Perkins.

No. of resolution.	Date of approval.		
601.	Jan. 2, 1885,	* *Oriental and Oregon streets, from Admiral to Borva, thence across land of the Providence and Worcester Railroad Co. to Ashburton,*	$11,430 16

June 10th, contracts for the construction of sewers, which have since been signed, were awarded as follows, viz.:

To John Keogh.

233.	May 24, 1886,	*East Beacon street, from Beacon to Marlborough, and in Marlborough to Lockwood,* . . .	$781 15
234.	" " "	*Friendship street, from No. 277 to Prince street,* .	341 10
235.	" " "	*Pleasant and Camp streets, from Ivy to Doyle avenue,*	1,362 70

* An agreement of the Providence and Worcester Railroad Company to allow the City to cross their land was received May 18, 1886.

During the last quarter the work of constructing sewers has been completed in the following streets:

No. of resolution.	Date of approval.	
294.	July 8, 1885,	*Pleasant street, from Camp to North Main.*
508.	Nov. 7, "	*Prospect street, from Hidden to Olney.*
529.	" 19, "	*Pine street, from Broad to Linden.*
530.	" " "	*Point street, from Beacon to Prairie avenue.*
100.	March 9, 1886,	*Myrtle street, from Broad to Pine.*

One catch-basin has been built on Clinton street, near Gay street.

Work of constructing the following sewers was in progress at the close of the last quarter:

No. of resolution.	Date of approval.	
601.	July 2, 1885,	*Oriental, Oregon and Ashburton streets, from Admiral to Webster.*
235.	May 24, 1886,	*Pleasant and Camp streets, from Ivy to Doyle avenue.*

Work upon the following sewers, completing the list ordered by the City Council, had not commenced June 30, 1886, viz.:

No. of resolution.	Date of approval.	
397.	Oct. 7, 1882,	*Orms street, from Carroll to present end of sewer in Orms.*
233.	May 24, 1886,	*East Beacon and Marlborough streets, from Beacon to Lockwood.*
234.	" " "	*Friendship street, from opposite No. 277 to Prince street.*
256.	June 16, "	*Brook street, from Bowen to Meeting.*

Bills approved on account of sewers from April 1 to June 30, 1886, inclusive, amounted to

For construction, ... $10,378 12

Charged as follows:

Materials	$2,904 16
Clerk's salary	75 00
Sundries	17 91
Sewer in Myrtle street, from Broad to Pine	450 29
Sewer in Oriental and Oregon streets	8 00
Sewer in Pleasant street, from Camp to North Main	2,978 61
Sewer in Pleasant and Camp streets	20 00
Sewer in Pine street, from Broad to Linden	967 71
Sewer in Point street, from Beacon to Prairie avenue	497 76
Sewer in Prospect street, from Hidden to Olney	1,390 60
Additional catch-basins	53 08
Contract reservations on completed sewers	1,015 00
	$10,378 12

For maintenance, ... $5,458 73

Charged as follows:

Cleaning basins and sewers	$2,811 85
Repairing basins and sewers	252 25
Cleaning and repairing old drains	393 87
Salaries—superintendent, clerks and inspectors	791 67
Barn expenses	596 76
Horses, wagons, carts, harnesses, etc	453 02
Tools	128 08
Sundries	23 35
Telephone lines	7 88
	$5,458 73

The *net* expenditure for construction of sewers to June 30, 1886, inclusive, was $1,759,001 50

The *net* expenditure for maintenance of sewers to June 30, 1886, inclusive, was 213,552 20

Bills deposited with the city treasurer for collection from April 1 to June 30, 1886, inclusive, amounted to $349 13

As follows:

Manure from barn	$76 50
Cleaning private drains, etc	72 00
Old rubber hose	51 00
Filling cisterns, boilers, etc	26 70
Pumping water from cellars, etc	17 33
Use of pump	103 50
Materials	2 10
	$349 13

During the quarter, coupons from bills collected have been returned by the city treasurer, and receipted for, amounting to $287 94

As follows:

Cleaning private drains, etc	$94 83
Manure from barn	76 50
Old hose	51 00
Pumping water from cellars, etc	43 72
Use of pump	17 00
Materials	4 89
	$287 94

CHAS. E. CARPENTER,
CLINTON D. SELLEW,
CHAS. H. HUNT,

Board of Public Works.

1886.] CITY DOCUMENT.

FIFTEENTH

QUARTERLY REPOR

OF THE

BOARD OF PUBLIC W

OF THE

CITY OF PROVIDENCE, R. I.

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QUARTER ENDING SEPTEMBER 30

PROVIDENCE.
PROVIDENCE PRESS COMPANY, PRINTERS TO THE
1886.

FIFTEENTH

QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING SEPTEMBER 30, 1886.

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1900

ORGANIZATION OF THE BOARD OF PUBLIC WORKS.

CHARLES E. CARPENTER, *President.*

CLINTON D. SELLEW, *Secretary.*

CHARLES H. HUNT.

OFFICES, CITY HALL

REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., OCTOBER 1, 1886.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 207 of the ordinances, approved February 14, 1883, the Board of Public Works respectfully presents its fifteenth quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, and the condition and the cost of same for the quarter ending September 30, 1886.

WATER WORKS.

On September 16th the Corliss engine, which had been still since July 23d, was again started, drawing its water through the new conduit from the basin instead of from the river. In freedom from vegetable matter and consequent economy in cleaning of screens, the change from river direct to river indirect, is accomplishing all that was expected.

August 12th, the board reported in detail to your honorable body relative to the purchase of land for a reservoir at Fruit Hill and roadway thereto. Further reference to the subject is therefore omitted in this report.

July 16, 1886, the proposal of Hopkins, Pomroy & Co. to furnish coal as follows was accepted, viz.:

1500 tons	egg	coal	delivered	at	Pettaconset	Pumping	station,	at	$3.90
100 "	"	"	"	"	Hope	"	"	"	3.40
200 "	stove	"	"	"	"	"	"	"	3.80

A contract was subsequently executed with said company.

During the quarter ending September 30, 1886, water pipes were laid as follows:

8-INCH.

In Elmwood avenue, Cranston and Olney streets, ... 1,348.5 feet

6-INCH.

In Black, Coville, Dahlia, Friend, Grand View, Knowles, Langdon, Lily, North Perry, Olney, Salem and Western streets, in Hazard avenue, in America street and Shaw avenue, Cranston, and in Waterman street, Johnston, ... 6,451.5 feet.

Total, ... 7.800. feet,

or 1.4773 miles.

Statement of sizes and lengths of pipes laid since the commencement of the work:

36-inch	10,084	feet.
30-inch	59,637	feet.
24-inch	23,942	feet.
20-inch	6,854.8	feet.
16-inch	31,574	feet.
12-inch	57,423.9	feet.
10-inch	14,758.1	feet.
8-inch	144,673.75	feet.
6-inch	671,459.17	feet.
Total	1,020,406.72	feet,

or, 193.2588 miles.

One fire hydrant was set during the last quarter in the following location:

Hazard avenue, north side, 308 feet east of Olney street.

The total number of fire hydrants is now twelve hundred and fifty-six: twelve hundred and forty-five flush, and eleven post hydrants.

The work of laying the following water pipes, completing the list ordered by the city council, had not commenced September 30, 1886, viz.:

No. of resolution.	Date of approval.	
537.	Nov. 28, 1885,	*Arlington street, from Humboldt avenue northerly.*
539.	" " "	*Nolan street, from Bernon northwesterly.*
366.	Sept. 8, 1886,	*Alton street, from Irving street southerly.*
369.	" " "	*Manton avenue, from present pipe northwesterly.*
397.	" 17, "	*Bellevue avenue, from present end of pipe to the school house.*
399.	" " "	*Colfax street, from present end of pipe to Prairie avenue.*
400.	" " "	*Colwell street, from present end of pipe easterly.*
401.	" " "	*Eddy street, from present end of pipe near Aldrich street southerly.*
403.	" " "	*Huron street, from Irving street northerly.*
404.	" " "	*Hendrick street, from present end of pipe westerly.*

The average daily consumption of water during the last quarter was 5,282,626 gallons.

During the quarter ending September 30, 1886, one hundred and fifty-four water meters were set; of which number twenty-seven were to replace condemned meters. The use of eight meters was discontinued. The following meters were in use at the close of the quarter:

Kind.	Size.							Total.
	⅝-in.	¾-in.	1-in.	1½-in.	2-in.	3-in.	4-in.	
Ball & Fitts, piston	2,893	564	137	46	7	.....	.....	3,647
Ball & Fitts, rotary	1	.....	22	27	3	7	3	63
Crown	2,504	425	115	40	12	3	3	3,102
Fales, Jenks & Sons	53	53	6	1	1	.....	.....	114
Worthington	91	1	.....	.....	1	.....	1	94
	5,542	1,043	280	114	24	10	7	7,020

Five plumbers' licenses were issued during the quarter, making the total number sixty-nine, all of which expire December 31, 1886.

Seven hundred and thirty-four permits to do plumbing were issued during the quarter.

One hundred and eighty-six applications for water were made during the quarter, making the total number September 30, 1886, thirteen thousand eight hundred and forty-five.

The number of new service stops opened during the quarter was two hundred and thirteen.

The total number of service stops opened to September 30, 1886, inclusive, was thirteen thousand one hundred and seventy-five. The number in actual use September 30, 1886, was twelve thousand four hundred and eighty-nine.

The amount of bills approved on account of water works from July 1 to September 30, 1886, inclusive, was

For construction and extension, . . $14,321 28

Classified as follows:

Prevention of defilement of the Pawtuxet	$3,111 10
Connecting Corliss engine with basin (Pettaconset)	3,058 46
Laying water pipes	2,486 02
Special castings	2,288 63
New road and grading at Corliss engine house (Pettaconset)	1,081 81
Laying service pipes	739 75
Barn expenses	379 42
Taps and stops	296 00
Fruit Hill reservoir for land	200 00
Fruit Hill reservoir for labor	189 68
Tools	181 88
Wharf salaries	150 00
Labor on and carting pipes	152 82
Horse and wagon account	5 71
	$14,321 28

For maintenance, ... $24,740 46

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$2,667 80	
Sundries	948 77	
Engineers	800 00	
Firemen	691 81	
Lights	468 32	
Superintendence	333 36	
Oil, waste and packing	250 23	
Corliss pumping engine and house	139 58	
Labor on fuel	67 80	
Barn expenses	54 98	
Care of grounds	37 37	
Cornish pumping engine	35 75	
Real estate	5 20	
		$6,500 92
Amount carried forward		$6,500 92

Amount brought forward		$6,500 92

SOCKANOSSET RESERVOIR.

Watchman	$183 00	
Care of reservoir, grounds, gate houses, etc	159 13	
		342 13

HOPE PUMPING STATION.

Coal and wood	$1,290 00	
Engineers	991 64	
Firemen	621 00	
Care of grounds	333 91	
Pumping engine No. 2, (Nagle)	196 13	
Lights	171 36	
Sundries	51 61	
Engine house	49 50	
Oil, waste and packing	40 76	
Pumping engine No. 1, (Corliss)	36 60	
		3,782 51

HOPE RESERVOIR.

Watchman	$274 50	
Care of reservoir, gate house, etc	14 87	
		289 37

PIPE LINE AND SERVICE STOPS.

Repairs	$1,439 60	
Superintendence—salaries	833 36	
		2,272 96

METER DEPARTMENT.

Water meters	$5,661 01	
Setting and repairing meters	1,275 63	
		6,936 64

MISCELLANEOUS.

Clerks' and inspectors' salaries	$3,260 90	
Barn expenses	276 60	
Analyses of water	276 00	
Telephone lines	256 00	
Horse and wagon account	250 75	
Sundries	157 50	
Amounts carried forward	$4,477 75	$20,124 53

Amounts brought forward	$4,477 75	$20,124 53
Horse hire	83 36	
Public drinking fountains and troughs	46 50	
Pipe yard, office expenses	8 32	
		4,615 93
		$24,740 46

The amount of expenditures from July 1 to September 30, 1886, inclusive, was . $39,061 74

The total expenditure to September 30, 1886, inclusive, was $6,337,603 69

The *net* expenditure for construction and extension from July 1 to September 30, 1886, inclusive, was	$13,554 01
The *net* expenditure for construction and extension to September 30, 1886, inclusive, was	5,089,773 99
The *net* expenditure for maintenance from July 1 to September 30, 1886, inclusive, was	18,405 24
The *net* expenditure for maintenance to September 30, 1886, inclusive, was	733,635 43

Bills deposited with the city treasurer for collection from July 1 to September 30, 1886, inclusive, amounted to $35,619 15

As follows:

Water	$30,728 59
Water meters	3,213 71
Setting and repairing meters	987 84
Rent of real estate	198 02
Grass from Hope reservoir	75 00
Wood from farms	13 00
Penalties	12 00
Repairing services	8 00
Permanently closing service stops	5 00
Labor and materials, laying service pipes	223 85
Lead dross	144 14
Manure from barn	10 00
	$35,619 15

During the quarter coupons from bills collected have been returned by the city treasurer, and receipted for, amounting to $37,189 57

As follows:

Water	$30,065 08
Water meters	4,429 80
Setting and repairing meters	1,392 81
Rent of real estate	255 11
Grass from Hope reservoir	225 00
Penalties	22 00
Permanently closing service stops	15 00
Wood from farms	13 00
Repairing services	4 50
Labor and materials, laying private fire supplies	392 81
Labor and materials, laying service pipes	215 58
Lead dross	144 14
Manure from barn	10 00
Special castings	4 74
	$37,189 57

The amount of bills approved on account of water works for the fiscal year ended September 30, 1886, inclusive, was

For construction and extension, . . $63,831 71

Charged as follows:

Hope reservoir, for land	$9,999 00
Fruit Hill reservoir, for land	8,471 90
Laying water pipes	7,124 81
Cast iron water pipes	6,852 28
Prevention of defilement of the Pawtuxet	6,212 47
Special castings	3,847 59
Fire hydrants, boxes and covers	3,737 00
Connecting Corliss engine, Pettaconset, with basin	3,343 43
Coal house, Pettaconset	2,553 51
Laying service pipes	2,503 33
Service pipe	2,115 00
Amount carried forward	$56,760 32

Amount brought forward	$56,760 32	
Rent of wharf and pipe yard	1,250 00	
Barn expenses	1,179 98	
Taps and stops	1,123 25	
New road and grading, Corliss engine house, Pettaconset	1,112 26	
Stop valves	997 00	
Wharf salaries	525 00	
Labor on and carting pipes	330 50	
Tools	290 70	
Fruit Hill reservoir, for labor	214 35	
Horse and wagon account	48 35	
	$63,831 71	

For maintenance, ... $71,184 30

Charged as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$7,422 01	
Sundries	3,232 89	
Engineers	2,400 00	
Firemen	1,914 77	
Cornish pumping engine	1,253 53	
Superintendence	1,000 00	
Lights	983 36	
Oil, waste and packing	783 99	
Corliss pumping engine and house	363 44	
Labor on fuel	249 75	
Real estate	168 01	
Barn expenses	135 90	
Care of grounds	121 75	
Cornish engine house	85 41	
Worthington pumping engine	2 84	
Horse and wagon account	2 38	
		$20,120 03

SOCKANOSSET RESERVOIR.

Watchman	$547 50	
Care of reservoir, grounds, gate houses, etc	289 46	
		836 96
Amount carried forward		$70,956 99

Amount brought forward		$20,956 99

Hope Pumping Station.

Engineers	$3,125 00	
Coal and wood	1,686 27	
Firemen	1,581 00	
Care of grounds	949 08	
Lights	458 72	
Pumping engine No. 2, (Nagle)	230 55	
Oil, waste and packing	157 70	
Sundries	119 66	
Pumping engine No. 1, (Corliss)	50 25	
Engine house	49 50	
		8,407 73

Hope Reservoir.

Watchman	$837 18	
Care of reservoir, gate house, etc	116 41	
		953 59

Pipe Line and Service Stops.

Repairs	$3,708 23	
Superintendence—salaries	2,450 02	
		6,158 25

Meter Department.

Water meters	$13,404 11	
Setting and repairing meters	4,392 88	
		17,796 99

Miscellaneous.

Clerks' and inspectors' salaries	$9,782 49	
Town of Cranston, tax	4,300 00	
Horse and wagon account	647 54	
Barn expenses	497 90	
Analyses of water	377 25	
Sundries	327 20	
Telephone lines	316 54	
Horse hire	250 00	
Public drinking fountains and troughs	193 78	
Real estate at Pawtuxet	143 72	
Pipe yard, office expenses	58 06	
Real estate in Lincoln, tax	14 77	
Buildings at pipe yard	1 50	
		16,910 75
		$71,184 30

SEWERS.

September 4th, the offer of J. Frank Read to lay private drains in Benefit street on the east side for one dollar per foot, and on the west side for one dollar and fifty cents per foot, was accepted.

September 21st, the proposal of Manchester & Hudson to furnish, delivered on the wharf occupied by the city, foot of Point street, four hundred thousand hard-body bricks, was accepted. Amount, $3,550.00. A contract was subsequently executed with said firm.

September 21st, the proposal of the Nayatt Brick Co. to furnish two hundred thousand hard-body bricks, delivered on the wharf occupied by the city, foot of Point street, was accepted. Amount, $1,400.00. A contract was subsequently made with said Company.

Assessments for the cost of constructing sewers in the following streets have been completed and certified to the city treasurer, viz.:

Congdon street, from Brown street northerly	$234 91
Union street, from Worcester street southerly	254 67
Howell and Camp streets, from East avenue to Lippitt	3,189 71
Vernon street, from present sewer to Vinton	989 06
Abbott street, from Knowles to North Main	1,899 08
Cushing street, from Thayer to Brook	653 20
Summer street, from Broad to Conduit	390 61
Spring street, from High to Pond	322 78
West Clifford street, from Dudley to Pearl	2,241 94
Prospect street, from Hidden to Olney	601 35
Point street, from Prairie avenue to Beacon street	597 44
Amount carried forward	$11,374 75

Amount brought forward	$11,374 75
Pine street, from Linden to Broad	1,163 88
Myrtle street, from Broad to Pine	481 10
Pleasant street, from Camp to North Main	4,298 07
Spring street, from Broad to Lockwood	1,199 44
	$18,516 74

During the quarter ending September 30, 1886, one hundred and sixty permits were issued drain layers; eighty-five for new work, and seventy-five for extension and repair of drains.

July 30th, contracts for the construction of sewers, which have since been signed, were awarded as follows, viz:

[The amounts given below are what is estimated will be paid the contractors for labor, and does not include cost of inspection and materials, or rock excavation, for which the contracts and specifications provide a price per cubic yard.]

No. of resolution.	Date of approval.		
256.	June 16, 1886,	*Brook street, from Bowen to Meeting,* . . .	$805 10
308.	July 3, "	*Elbow street, from Tippecanoe to Ship,* . . .	284 20
333.	" 17, "	*Benefit street, from summit northerly of Church street to Star street,* . . .	457 80
334.	" " "	*Benefit and Thomas streets, from Meeting to North Main*	1,397 65
335.	" " "	*Benefit street, from* 170 *feet northerly from Church street to Meeting street,* .	1,923 10
336.	" " "	*Benefit street, from Williams to Power,* . .	734 80
337.	" " "	*John street, from East to Brook,*	1,167 60

September 30th, contracts for the construction of sewers, which have since been signed, were awarded as follows, viz.:

TO JOHN KEOGH.

374.	Sept. 8, 1886,	*Charles and Ashburton streets, from West River bridge to present sewer in Ashburton street,* . .	$5,087 90
396.	" 17, "	*Lippitt street, from 40 feet west of Dwight to Camp,*	644 40

TO JAMES J. NEWMAN.

376.	Sept. 8, 1886,	*Hay street, from Pine to Dyer,*	$262 00

The proposals for constructing the following sewers have been rejected, viz.:

373.	Sept. 8, 1886,	*Broad street, from Somerset to Pearl.*
375.	" " "	*Friendship street, from Pearl to Somerset.*

During the last quarter the work of constructing sewers has been completed in the following streets:

No. of resolution.	Date of approval.	
233.	May 24, 1886,	*East Beacon and Marlborough streets, from Beacon to Lockwood.*
234.	" " "	*Friendship street, from opposite No. 277 to Prince street.*
235.	" " "	*Pleasant and Camp streets, from Ivy to Doyle avenue.*
308.	July 3, "	*Elbow street, from Tippecanoe to Ship.*
336.	" 17, "	*Benefit street, from Williams to Power.*
334.	" " "	*Benefit and Thomas streets, from Meeting to North Main.*
356.	Aug. 30, "	*Benefit street, private drains laid to curb from Transit street to Angell street.*

Catch-basins have been built as follows, viz.:

1 at southwest corner of old city building.
1 on Conduit street at Summer.
1 on Conduit street at Stewart.
1 on Greenwich street at Daboll.
1 on Spruce street at McAvoy.
1 extra inlet on north side of Market square.
1 extra inlet on East Beacon street, corner of Marlborough.

Work of constructing the following sewers was in progress at the close of the last quarter:

No. of resolution.	Date of approval.	
601.	July 2, 1885,	*Oriental, Oregon and Ashburton streets, from Admiral to Webster.*
333.	" 17, 1886,	*Benefit street, from summit near Church to Star street.*
335.	" " "	*Benefit street, from summit near Church to Meeting street.*

Work upon the following sewers, completing the list ordered by the City Council, had not commenced September 30, 1886, viz.:

No. of resolution.	Date of approval.	
397.	Oct. 7, 1882,	*Orms street, from Carroll to present end of sewer in Orms.*
256.	June 16, 1886,	*Brook street, from Bowen to Meeting.*
337.	July 17, "	*John street, from East to Brook.*
373.	Sept. 8, "	*Broad street, from Somerset to Pearl.*
374.	" " "	*Charles and Ashburton streets, from West River bridge to present sewer in Ashburton street.*
375.	" " "	*Friendship street, from Somerset to Pearl.*
376.	" " "	*Hay street, from Pine to Dyer.*

Bills approved on account of sewers from July 1 to September 30, 1886, inclusive, amounted to

For construction, ... $30,645 28

Charged as follows:

Materials	$7,907 90
Rent of wharf and pipe yard	625 00
Clerk's salary	150 00
Tools	24 59
Testing cement	35
Sewer in Benefit street, from Williams to Power	758 47
" Benefit and Thomas streets	1,678 30
" Benefit street, from Church to Meeting	1,915 38
" Benefit street, from Church to Star	2 80
" East Beacon and Marlborough streets	803 07
" Elbow street, from Tippecanoe to Ship	235 28
" Friendship street, from opposite No. 277 to Prince	356 40
" Myrtle street, from Broad to Pine	3 60
" Oriental and Oregon streets	9,009 63
" Pine street, from Broad to Linden	5 40
" Pleasant and Camp streets	4,456 84
" Pleasant street, from Camp to North Main	16 45
" Point street, from Beacon to Prairie ave.	2 70
" Prospect street, from Hidden to Olney	3 60
Additional catch-basins	45 37
Private drains in Benefit street	357 65
Outlet at Whelden street bridge	114 50
Contract reservations on completed sewers	2,172 00
	$30,645 28

For maintenance, ... $7,283 83

Charged as follows:

Cleaning basins and sewers	$4,310 22
Repairing basins and sewers	378 93
Cleaning and repairing old drains	235 82
Amount carried forward	$4,924 97

Amount brought forward	$4,924 97	
Salaries—superintendent, clerk, and inspector	1,066 66	
Tools	652 93	
Barn expenses	402 00	
Horses, wagons, carts, harnesses, etc	215 60	
Sundries	14 52	
Telephone lines	7 15	
	$7,283 83	

The *net* expenditure for construction of sewers to September 30, 1886, inclusive, was $1,789,472 01

The *net* expenditure for maintenance of sewers to September 30, 1886, inclusive, was 220,608 39

Bills deposited with the city treasurer for collection from July 1, to September 30, 1886, inclusive, amounted to $273 16

As follows:

Cleaning private drains, etc	$100 23
Filling cisterns, boilers, etc	54 86
Pumping out cellars, etc	2 90
Use of pump	2 00
Private drains laid in streets	71 25
Materials	11 92
Use of pump	30 00
	$273 16

During the quarter coupons from bills collected have been returned by the city treasurer, and receipted for, amounting to . . $402 41

As follows:

Cleaning private drains, etc	$120 48
Filling cisterns, boilers, etc	81 56
Pumping out cellars, etc	23 60
Use of pump	2 00
Private drains laid in streets	71 25
Materials	14 02
Use of pump	89 50
	$402 41

The amount of bills approved on account of sewers for the fiscal year ended September 30, 1886, was

For construction, ... $77,599 98

Charged as follows:

Materials	$12,607 42
Rent of wharf and pipe yard	1,250 00
Clerk's salary	375 00
Tools	41 77
Sundries	17 91
Testing cement	5 10
Sewer in Abbott street, from Knowles to North Main	1,785 31
" Benefit street, from Williams to Power.	758 47
" Benefit and Thomas streets	1,678 30
" Benefit street, from Church to Meeting.	1,915 38
" Benefit street, from Church to Star	2 80
" Burgess street, from High to Cranston	9 00
" Clinton street, from Prairie avenue to Plain street	2,596 14
" Congdon street, from Bowen street northerly	3 60
" Cushing street, from Brook to Thayer	494 67
" East Beacon and Marlborough streets	803 07
" Elbow street, from Tippecanoe to Ship	235 28
" Friendship street, from opposite No. 277 to Prince	356 40
" Halsey and Benefit streets	22 50
" Howell and Camp streets	18 20
" Kenyon street, from America to Federal.	1,599 29
" Lockwood and Plain streets	16,174 75
" Myrtle street, from Broad to Pine	453 89
" Oriental and Oregon streets	9,017 63
" Pine street, from Broad to Linden	973 11
" Pleasant and Camp streets	4,476 84
" Pleasant street, from Camp to North Main	2,995 06
" Point street, from Beacon to Prairie avenue	500 46
" Prospect street, from Hidden to Olney	1,394 20
Amount carried forward	$62,561 55

Amount brought forward	$62,561 55
Sewer in Spring street, from Broad to Lockwood	954 99
" Spring street, from High to Pond	388 27
" Summer street, from Broad to Conduit	462 66
" Thayer street, from Williams to John	7 90
" Union street, from Worcester street, southerly	1 80
" Vernon street, from present end of sewer to Vinton street	491 58
" Webster and Ashburton streets	6,945 33
" West Clifford street, from Dudley to Pearl	1,381 02
Additional catch basins	300 63
Catch basin in Dexter street	23 10
Private drains in Benefit street	357 65
Outlet at Whelden street bridge	114 50
Contract reservations on completed sewers	3,609 00
	$77,599 98

For maintenance, ... $21,644 01

Charged as follows:

Cleaning basins and sewers	$12,446 82
Repairing basins and sewers	940 43
Cleaning and repairing old drains	973 83
Salaries— superintendent, clerk and inspector	3,149 98
Barn expenses	1,794 52
Tools	1,115 10
Horses, wagons, carts, harnesses, etc	1,044 83
Sundries	87 49
Telephone lines	53 51
Care of dumps	37 50
	$21,644 01

HIGHWAYS.

July 16th, the proposal of Hopkins, Pomroy & Co. to furnish coal as follows was accepted, viz.:

135 tons egg coal, to be taken at their yard, at $3.15 per ton.
120 tons Cumberland coal, to be taken at their yard, at $3.00 per ton.

August 14th, all proposals that had been received for grading Veazie street were rejected, and on the 17th Mr. Michael Lannon accepted the offer of the board to do the work for sixteen cents per cubic yard. A contract was subsequently executed with Mr. Lannon.

September 2d, the proposal of Richard Barry for grading Brown street for the sum of twenty-five cents per cubic yard was accepted, and a contract subsequently executed with him for doing the work.

September 30th, the proposal of Frank Slavin to grade Gordon avenue and Austin and Hamilton streets for the sum of eighteen cents per cubic yard was accepted, and a contract subsequently executed with him for doing the work.

During the quarter the board, not receiving curbing from the contractors fast enough to proceed with the work, purchased from various parties without advertising, six thousand feet at a cost to the city of $4,100.00.

Uncollected curbing bills, returned by the city treasurer, were certified to the assessors of taxes August 9, 1886, amounting to $6,521.40.

Ten permits to open streets were issued during the quarter.

During the last quarter, portions of the following streets have been repaired:

Back,	Admiral,
Charles,	Tockwotton,
Pine,	Elmwood avenue,
Public,	Chalkstone ave., junction of Manton ave.

During the quarter ending September 30, 1886, the following work was completed, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of order.

Sept. 11, 1884, *Doyle avenue, from East avenue to Olney street.*

Sept. 18, " *George street, from Ives to Gano.*

July 16, 1885, *Sheldon street, from Brook to Hope.*

Sept. 27, 1886, *Benefit street opposite estate of Oliver A. Washburne, Jr.*

Sidewalks to be Concreted.

No. of resolution. Date of approval.

85. Feb. 20, 1886, *Manton avenue, from Delaine to Pelham street.*

230. May 24, " *Corner Borden and Plain streets, in front of 5th Police Station.*

To be Brought to Grade.

Date of order.

Oct. 15, 1885, *Sayles street at school house estates.*

July 8, 1886, *Sayles street, from Harriet to Prairie avenue.*

" 15, " *Sayles street, from Burnside to Ocean.*

Aug. 5, " *Early street, from Broad to Prairie avenue.*

WORK ORDERED SUSPENDED.

No. of resolution. Date of approval.

332. July 5, 1884, *Richmond street, from Ship to Point*, to be paved with granite blocks.

The following work was, September 30, 1886, in progress, viz.:

SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.

May 7, 1883, *Reservoir avenue, east side, from Greenwich street to the railroad bridge*:—work completed except concreting gutters.

Dec. 31, 1883, *Dexter street, from Cranston to Cromwell*:—finished except concreting gutters.

June 19, 1884, *Carter street, from Greenwich to the railroad*:— finished to within about 115 feet of railroad, except concreting gutters.

" 26, " *Diman place, from Angell street to Asylum wall*:—finished except concreting gutters.

" " " *Stimson avenue, from Hope street to Angell*:—finished except concreting gutters.

Oct. 16, " *Burnett street, from Greenwich to Public*:—finished except concreting gutters.

" " " *Daboll street, from Greenwich to Updike*:—finished except concreting gutters.

" " " *Grove street, from Almy to Tobey*.

June 18, 1885, *George street, from Governor to Ives*.

July 16, " *Grant street, from Knight to Carpenter*:—finished except concreting gutters.

Sept. 17, " *Pleasant street, from North Main to Camp*.

" 2, 1886, *Benefit street, opposite sundry estates*.

Sidewalks to be Concreted.

No. of resolution. Date of approval.

292. July 1, 1886, *Adjoining Franklin Square (so called).* The portions upon the south and west sides have been completed.

To be Brought to Grade.

Date of order.

Dec. 27, 1883, *Highway, adjacent to estate of Wanton Durfee and Humphrey Almy, on Dyer and Custom House streets:*— brought to grade except the portion in front of Humphrey Almy estate, which has been delayed to avoid legal and other difficulties.

Dec. 1, 1885, *Jackson avenue, adjacent to the estates of Eugene Dailey and wife, and Sarah Cusick, and fill in around the houses when they shall have been raised:*—the Dailey estate and a portion of the Cusick estate have been brought to grade.

Brought to Grade.

No. of resolution. Became a law.

348. July 22, 1886, *Veazie street, at the bridge.*

To be Brought to Grade and Provisions Made for Surface Water.

Date of order.

July 1, 1886, *Ridge street, from west line of Tobey street to Atwell's avenue, and Atwell's avenue near railroad bridge.*

To be Repaired.

No. of resolution.	Date of approval.	
125.	March 30, 1886,	*West Friendship street, cobble pavement to be removed and roadway macadamized:*—finished except concreting gutters.
297.	July 1, "	*Benefit street, from Halsey to Transit.*

To take Possession of.

Date of order.	
April 16, 1885,	*Earle's lane, now Pleasant street, from North Main street to Camp:*— a portion near North Main street has been brought to grade.
May 6, 1886,	*Brown street, from Olive to Barnes.*
" " "	*Wickenden street, from Benefit to a point near junction of Bridge and Farthing streets.*

Obstructions to be Removed.

Oct. 4, 1883, *Branch avenue, from Smithfield avenue to Douglas avenue:*— obstructions in the way of grading the avenue have been removed so as to make it passable. The line of occupation, in places, encroaches upon the avenue as laid out.

Concreting Sidewalks.

Aug. 3, 1882, *Julian and Capron streets, adjoining Julian street school house estate:*— portion in Julian street finished.

To be Filled.

July 17, 1884, *Pond opposite works of the Nicholson File Company:*— a small portion of the pond has been filled.

Paved with Granite Blocks.

No. of resolution. Date of approval.

85. March 6, 1885, *Market square and College street, portions of.*

The following work ordered by the Board of Aldermen and City Council had not commenced September 30, 1886, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of order.

Aug. 3, 1882, *Capron street, in front of Julian street school-house estate.*

Oct. 19, " *Potter's avenue, from Broad street to Greenwich.*

Nov. 16, " *Eddy street, from Thurber's avenue to Pavilion avenue.*

July 19, 1883, *Chalkstone avenue, from Charles street to Black.*

June 26, 1884, *Richmond street, from Ship to Point.*

Oct. 16, " *Webster street, from Delhi to Ambrose.*

March 19, 1885, *Blackstone street, south side, from Plain to Eddy.*

April 16, " *Burnside street, from Public to Potter's avenue.*

" " " *Peace street, from Broad to Prairie avenue.*

" " " *Woodland street, from Park to Holden.*

May 21, " *Adelaide avenue, north side, from Elmwood avenue to Melrose street.*

" " " *Chalkstone avenue, from Douglas to Smith street.*

" " " *Cushing street, from Prospect to Brook.*

June 4, " *Beacon street, from Lockwood to Pearl.*

" " " *Creighton street, from Prospect to Brown.*

June 18,	1885,	*Blackstone street, north side, from Eddy to Culver.*
" "	"	*Pekin street, from Chalkstone avenue to Bailey street.*
" "	"	*Public street, from Broad to Greenwich.*
July 16,	"	*Brighton street, from Knight to Vinton.*
Sept. 17,	"	*Vineyard street, from Hawthorne to Carter.*
Oct. 15,	"	*Smith street, from Ruggles to Oakland avenue.*
Nov. 19,	"	*Briggs street, from Ocean to Plain.*
" "	"	*Linden street, from West Clifford to Providence.*
" "	"	*Whitmarsh street, from Broad to Updike.*
Dec. 17,	"	*Hedley street, from Palmer to Shove.*
" "	"	*Ives street, from Pitman to Waterman.*
" "	"	*Laura street, from Melrose to Hamilton.*
" "	"	*Tockwotton street, from Benefit to South Main.*
Jan. 27,	1886,	*Governor street, from Wickenden to Tockwotton.*
Feb. 18,	"	*Public street, from Broad to Prairie avenue.*
April 15,	"	*Wilson street, from Harrison to Dexter.*
May 20,	"	*Adelaide avenue, adjoining estate of William Whitehead.*
June 17,	"	*Austin street, from Public to Potter's avenue.*
" "	"	*Chalkstone avenue, from Academy to River avenue.*
" "	"	*Cypress street, from Camp to East avenue.*
" "	"	*Hamilton street, from Potter's to Adelaide avenue.*
" "	"	*Sayles street, from Eddy to Plain.*
" "	"	*Violet street, from Orms to Chalkstone avenue.*
Aug. 5,	"	*Princeton avenue, from Broad to Greenwich.*

Amount brought forward	$50,124 83	
Sundries	52 20	
Telephone lines	28 63	
Office expenses, city yard	10 54	
		$50,216 20

NEW WORK.—BUILDING AND RE-BUILDING STREETS, ETC.,

SIDEWALKS CURBED AND GUTTERS PAVED.

Benefit street, in front of certain estates	$46 14
Benefit street, in front of estate of O. A. Washburne, Jr	31 96
Borden street, opposite 5th police station	97 09
Burnett street, from Greenwich to Public	603 76
Daboll street, from Greenwich to Updike	1,232 98
Doyle avenue, from East avenue to Olney street	2,819 14
George street, from Governor to Ives	11 36
George street, from Ives to Gano	2,713 96
Grant street, from Knight to Carpenter	1,419 00
Reservoir avenue, east side, from Greenwich street to railroad bridge	1,315 40
Sheldon street, from Hope to Brook	1,706 17

BROUGHT TO GRADE.

Early street, from Broad to Prairie avenue	74 16
Ridge street, from Tobey to Atwell's avenue	289 34
Sayles street, vicinity of school house estate	233 96
Sayles street, from Harriet to Prairie avenue	188 84
Sayles street, from Burnside to Ocean	201 10
Veazie street, at the bridge	462 00

PAVED WITH GRANITE BLOCKS.

Dorrance street, from Westminster to Exchange place	64 74
Market square and College street, portions of	3,355 63

REPAIRED.

West Friendship street, cobble pavement to be removed, etc	96 50	
Amounts carried forward	$16,963 23	$50,216 20

Amounts brought forward	$16,963 23	$50,216 20
TAKE POSSESSION OF.		
Brown street, from Olive to Barnes	80 50	
Wickenden street, from Benefit to junction of Bridge and Farthing	61 00	
CONCRETE SIDEWALKS.		
Franklin square, sidewalks adjoining	81 32	
RE-BUILD.		
Benefit street, from Short alley to Transit street	1,104 56	18,290 61
		$68,506 81

Bills deposited with the city treasurer for collection, from July 1 to September 30, 1886, inclusive, amounted to $524 74

As follows:

Labor and materials	$324 75
Street sweepings	116 24
Manure from barn	64 50
Chopping blocks	14 25
Old cart body	5 00
	$524 74

During the quarter coupons from bills collected have been returned by the city treasurer, and receipted for, amounting to . . . $429 40

As follows:

Street sweepings	$142 54
Manure from barn	129 00
Labor and materials	116 61
Wheelbarrows	25 00
Chopping blocks	11 25
Old cart body	5 00
	$429 40

The amount of bills approved on account of highways for the fiscal year ended September 30, 1886, was $199,537 55

Charged as follows:

Repairs on unpaved streets	$45,199 16	
Repairs on paved streets	3,949 85	
Culverts repaired damaged by storm February 13	3,082 89	
Culvert on Butler avenue repaired	1,519 38	
Cleaning streets	24,654 39	
Crushed stone—materials and labor	30,693 04	
Screening gravel	8,189 92	
Barn expenses	6,718 43	
Stone—paving and crosswalk	6,231 76	
Salaries—superintendent, clerks' and inspectors'	4,904 30	
Blacksmith and wheelwright shop	4,030 42	
Removing ice and snow from streets	4,624 78	
Tools, implements, etc	2,821 29	
Horses, wagons, carts, harnesses, etc	2,263 91	
Repairs on stone crushers	1,955 38	
Steam rollers, repairs and supplies	1,706 23	
Labor on materials	1,477 46	
Harness shop, materials and labor	819 53	
Watchman at city yard	819 53	
Veazie street surface drain	461 41	
Sundries	235 65	
Fencing streets, materials and labor	225 41	
Trimming trees	162 60	
Horse car tickets	124 90	
Office expenses, city yard	64 89	
Telephone lines	34 43	
		$156,970 94

New Work, Building and Re-Building Streets.

Sidewalks Curbed and Gutters Paved.

Benefit street, in front of certain estates	$46 14	
Benefit street, in front of estate of O. A. Washburne, Jr	31 96	
Bond street, from Atwell's avenue to Federal street	257 38	
Borden street, opposite 5th police station	97 09	
Burnett street, from Greenwich to Public	603 76	
Amounts carried forward	$1,036 33	$156,970 94

Amounts brought forward	$1,036 33	$156,970 94
Carter street, from Greenwich street to the railroad	1,261 63	
Clinton street, from Prairie avenue to Gay street	1,184 42	
Clinton street, from Gay to Plain	1,188 26	
Davis street, west side, from Common to Orms	73 66	
Daboll street, from Greenwich to Updike	1,232 98	
Dexter street, from Cranston to Common	2,142 78	
Diman place, from Angell street to Asylum wall	1,052 84	
Doyle avenue, from East avenue to Olney street	3,524 48	
Elmwood avenue, from Adelaide avenue southerly 560 feet	1,209 51	
Fenner avenue, adjoining estate of O. Burchard and Harriet A. Swarts	25 78	
Fremont street, from Governor to Ives	909 11	
George street, from Governor to Ives	11 36	
George street, from Ives to Gano	2,713 96	
Grant street, from Knight to Carpenter	1,419 00	
Greenwich street and Elmwood avenue	57 80	
Manning street, from Hope to Thayer	1,484 68	
Miller street, from Dexter to Division	1,054 67	
Reservoir avenue, east side, from Greenwich street to railroad bridge	1,950 37	
Sheldon street, from Hope to Brook	1,706 17	
Stimson avenue, from Hope to Angell street	3,198 05	
Warren street, from Fuller to Dexter	141 36	
Wellington street, from East Beacon to Pearl	580 52	

BROUGHT TO GRADE.

Benefit street, east side, from south line of estate of the First Congregational Society to Benevolent street	73 39	
Early street, from Broad to Prairie avenue	74 16	
Fenner avenue, abutting on estate of Peter Gavigan	90 97	
Jackson avenue, adjacent to estates of Eugene Dailey and wife, and Sarah Cusick	328 14	
Ridge street, from Tobey to Atwell's avenue	289 34	
Sayles street, vicinity of school house estate	717 38	
Sayles street, from Harriet to Prairie avenue	188 84	
Sayles street, from Burnside to Ocean	201 10	
Veazie street, at the bridge	462 00	
Amounts carried forward	$31,585 04	$156,970 94

Amounts brought forward	$31,585 04	$156,970 94

REPAIRED.

Dorrance, Pine and Eddy streets, in the immediate vicinity of the estate of the Freemasons' Hall Company	47 83	
Bullion street, from South Water westerly about 40 feet	100 90	
Peck and Friendship streets, in the immediate vicinity of the estate of Charles D. W. and Henrietta M. K. Brownell	31 48	
West Friendship street, cobble pavement to be removed, etc	830 10	

PAVED WITH GRANITE BLOCKS.

Dorrance street, from Westminster street to Exchange place	64 74	
Market Square and College street, portions of	3,355 63	

TAKE POSSESSION OF.

Brown street, from Olive to Barnes	80 50	
Clinton street, from present termination to Plain	16 53	
Earle's lane (now Pleasant street), from North Main to Camp	453 19	
Wickenden street, from Benefit to junction of Bridge and Farthing	61 00	

CONCRETE SIDEWALK.

Franklin square, sidewalks adjoining	81 32	

REBUILD.

Benefit street, from Short alley to Transit street	1,104 56	

PUT IN CONDITION SAFE FOR PUBLIC TRAVEL.

Fenner avenue, from Cranston street to Reservoir avenue	2,749 63	

STREET WASHINGS REMOVED.

Woonasquatucket river, at Tar bridge	223 78	
Amounts carried forward	$40,786 23	$156,970 94

Amounts brought forward	$40,786 23	$156,970 94
FENCE SET BACK.		
West Friendship street, west side, near Greenwich street	72 22	
SURFACE DRAIN PUT IN.		
Dexter street, at corner of Cranston	390 59	
CURBING SET, GUTTERS PAVED AND SIDEWALKS CONCRETED.		
America street and Atwell's avenue, adjoining lot occupied by fire station and evening school	69 60	
CURBING RESET AND GUTTERS REPAVED.		
Waterman street, from Brown to Brook	370 08	
TURN SURFACE WATER FROM EARLY STREET POND.		
Broad street, at Early	875 71	
TREES TO BE TRIMMED.		
Hedley street, opposite Palmer	2 18	
		42,566 61
		$199,537 55

The amount of expenditures on account of sidewalks and curbing, from July 1 to September 30, 1886, inclusive, was $3,596 91

Sidewalks and curbing bills deposited with the city treasurer for collection, from July 1 to September 30, 1886, inclusive, amounted to . $693 76

During the quarter coupons from sidewalks and curbing bills collected have been returned by the city treasurer, and receipted for, amounting to $1,985 65

The amount of expenditures for sidewalks and curbing during the fiscal year ended September 30, 1886, was $7,274 80

CHAS. E. CARPENTER,
CLINTON D. SELLEW,
CHAS. H. HUNT,
Board of Public Works.

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SIXTEENTH QUARTERLY REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING DECEMBER 31, 1886.

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1900.

ORGANIZATION OF THE BOARD OF PUBLIC WORKS.

CHARLES E. CARPENTER, *President.*
CLINTON D SELLEW, *Secretary.*
CHARLES H. HUNT.

OFFICES, CITY HALL.

REPORT.

OFFICE OF THE BOARD OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., JANUARY 1, 1887.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 207 of the ordinances, approved February 14, 1883, the Board of Public Works respectfully presents its sixteenth quarterly report of the expenditures by the several departments under its direction and control, with statements of work ordered, and the condition and the cost of same for the quarter ending December 31, 1886.

WATER WORKS.

October 18th, the proposal of Charles E. Hall for building a road in North Providence, from Smith street to the land purchased for reservoir purposes, was accepted and a contract subsequently executed. Estimated amount of the contract, $2,942.50.

October 21st, the wood standing upon a portion of the land purchased for a reservoir at Fruit Hill, was sold to Walter S. Seamans for one hundred dollars and the furnishing to the city 1,500 fence posts.

October 22d, the proposal of the Camden Iron Works, of Camden, N. J., to furnish five hundred tons of six-inch, and twenty-two hundred and thirty-three tons of twenty-four inch, cast-iron water pipes, was accepted. A contract has

since been executed with said company for furnishing these pipes which will amount to $73,324.50.

November 17th, the offer of the Whittier Machine Company, of Boston, to furnish, delivered in this city, six twenty-four inch water gates, was accepted. Amount, $1,395.00.

December 20th, the offer of the Whittier Machine Company, of Boston, to furnish, delivered in this city, ten four-inch; sixty six-inch; twenty-two eight-inch, and seven twenty-four-inch water gates, was accepted. Amount, $3,557.36.

December 23d, the offer of Thomas Phillips & Co. to furnish, delivered at wharf occupied by the city, thirty-three thousand pounds of lead pipe of various sizes, and twenty thousand pounds of pig lead, was accepted. Amount, $2,600.00.

December 29th, the Fuller Iron Works accepted the offer of the Board to furnish special castings. Propositions received for this having previously been rejected.

December 30th, a lease of the "Randall Estate," so called, at Pawtuxet, was executed with David A. Crowell, of Cranston, for one year from January 1, 1887, at an annual rent of three hundred dollars.

During the quarter ending December 31, 1886, water pipes were laid as follows:

8–INCH.

In Eddy and Niagara streets, Taber avenue, and in Old Killingly Road, Johnston, 2,517.4 feet.

6-INCH.

In Alton, Bell, Colfax, Colwell, Eiswald, Hendrick, Huron, Laurel, Levina, Niagara and South Perry streets, and in Bellevue avenue, ...	2,609.2 feet.
Total, ...	5,126.6 feet,

or .9709 miles.

Statement of sizes and lengths of pipes laid since the commencement of the work:

36-inch	10,084	feet.
30-inch	59,637	feet.
24-inch	23,942	feet.
20-inch	6,854.8	feet.
16-inch	31,574	feet.
12-inch	57,423.9	feet.
10-inch	14,758.1	feet.
8-inch	147,191.15	feet.
6-inch	674,068.37	feet.
Total	1,025,533.32	

or, 194.2298 miles.

Three fire hydrants were set during the last quarter, one in each of the following locations:

Hendrick street, northeast corner of Mt. Pleasant avenue.

Old Killingly road, Johnston, northeast corner of Tilton street.

Old Killingly road, Johnston, northeast side, 146 feet southeast of Killey street.

The total number of fire hydrants is now twelve hundred and fifty-nine: twelve hundred and forty-eight flush, and eleven post hydrants.

The work of laying the following water pipes, completing the list ordered by the city council, had not commenced December 31, 1886, viz.:

No. of resolution.	Date of approval.	
537.	Nov. 28, 1885,	*Arlington street, from Humboldt avenue northerly.*
539.	" " "	*Nolan street, from Bernon northwesterly.*
470.	Oct. 25, 1886,	*Bergen street, from Irving street northerly.*
471.	" " "	*Blackstone street, from Prairie avenue easterly.*
472.	" " "	*Manchester street, from Hospital street westerly.*
474.	" " "	*Whipple, Oregon and Derry streets.*
475.	" " "	*Richmond street, from present end of pipe west of Plain street westerly.*
476.	" " "	*Sampson avenue, Burrington street and Jackson avenue, from present end of pipe to Barnaby street.*
508.	Nov. 26, "	*Ashton and Silver Spring streets.*
509.	" " "	*Cambridge street, from Broad street westerly.*
510.	" " "	*Evergreen street, from Camp street westerly.*
511.	" " "	*Greeley street, from Charles street westerly.*
512.	" " "	*Harriet street, from Sayles street northerly.*
514.	" " "	*Shepard street, from Carpenter to Broadway.*
576.	Dec. 31, "	*Somerset street to supply school estate.*

The average daily consumption of water during the last quarter was 4,604,844 gallons.

During the quarter ending December 31, 1886, one hundred and forty-seven water meters were set; of which number twenty-seven were to replace condemned meters.

The use of five meters was discontinued. The following meters were in use at the close of the quarter:

Kind.	Size.							Total.
	⅝-in.	¾-in.	1-in.	1½-in.	2-in.	3-in.	4-in.	
Ball & Fitts, piston	2,905	565	138	46	7	.....	.....	3,661
Ball & Fitts, rotary	1	.....	22	27	3	7	3	63
Crown	2,612	437	115	43	13	3	3	3,226
Fales, Jenks & Sons	43	49	5	.....	1	.....	.....	98
Worthington	84	1	.....	.....	1	.....	1	87
	5,645	1,052	280	116	25	10	7	7,135

One plumber's license was issued during the quarter, making the total number sixty-nine, all of which expired December 31, 1886.

Six hundred and ninety-four permits to do plumbing were issued during the quarter.

One hundred and thirty-two applications for water were made during the quarter, making the total number, December 31, 1886, thirteen thousand nine hundred and seventy-seven.

The number of new service stops opened during the quarter was one hundred and thirty-seven.

The total number of service stops opened to December 31, 1886, inclusive, was thirteen thousand three hundred and twelve. The number in actual use, December 31, 1886, was twelve thousand five hundred and fifty-two.

The following table exhibits the number of service stops opened each month from the commencement to December 31, 1886:

Mos.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
Jan.....	.....	54	33	21	34	55	15	49	9	20	7	17	15	21	17	18
Feb....	.....	47	18	18	7	25	23	18	9	19	3	11	9	10	7	15
March..	.....	38	34	63	7	45	32	60	19	46	23	39	11	28	9	21
April...	.....	109	109	108	32	108	82	78	52	58	55	49	55	62	48	[illegible]
May....	.....	224	206	147	162	168	136	95	80	84	66	72	78	62	62	[illegible]
June...	.....	329	295	151	172	148	114	103	71	109	82	48	64	81	81	[illegible]
July...	.....	333	261	127	141	158	83	80	49	75	56	77	66	76	77	83
Aug....	.....	224	209	123	83	94	91	51	51	39	58	87	69	61	57	[illegible]
Sept...	.....	184	147	139	101	94	80	63	44	37	60	67	93	50	70	[illegible]
Oct.....	.....	138	135	160	92	84	81	78	79	48	61	56	47	65	62	[illegible]
Nov....	.....	100	104	185	86	54	73	57	63	54	37	64	49	51	39	[illegible]
Dec....	56	83	45	122	60	35	55	45	47	29	40	27	56	44	46	[illegible]
	56	1,863	1,596	1,364	977	1,068	865	777	573	618	548	614	612	611	575	[illegible]

The receipts for water each year since the commencement has been as follows:

Year.	Amount.	Year.	Amount.	Year.	Amount.
1872.....	41,003 51	1877.....	200,039 39	1882.....	269,318 77
1873.....	97,386 09	1878.....	218,883 33	1883.....	283,622 80
1874.....	132,052 39	1879.....	229,551 78	1884	302,308 36
1875.....	165,144 71	1880.....	247,705 06	1885.....	313,561 21
1876.....	183,868 73	1881.....	260,530 87	1886.....	323,084 67

The amount of bills approved on account of water works, from October 1 to December 31, 1886, inclusive, was

For construction and extension, . . . $4,947 28

Classified as follows:

Fruit Hill reservoir, for land	$1,200 00
Fruit Hill reservoir, for road	537 00
Fruit Hill reservoir, for labor	378 89
Laying water pipes	1,001 55
Rent of wharf and pipe yard	625 00
Laying service pipes	560 40
Barn expenses	251 17
Special casting	137 01
Wharf salaries	75 00
Public drinking troughs	66 88
Labor on and carting pipes	58 20
Horse and wagon account	40 65
Tools	15 53
	$4,947 28

For maintenance, ... $15,929 00

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$1,020 84	
Sundries	849 99	
Engineers	400 00	
Firemen	391 50	
Superintendence	166 66	
Corliss pumping engine and house	136 43	
Oil, waste and packing	116 78	
Real estate	63 00	
Care of grounds	41 96	
Labor on fuel	31 95	
Barn expenses	22 72	
Worthington pumping engine	4 15	
Cornish pumping engine	3 70	
		$3,249 68
Amount carried forward		$3,249 68

Amount brought forward		$3,249 68

SOCKANOSSET RESERVOIR.

Watchman	$91 50	
Care of reservoir, grounds, etc	12 67	
		104 17

HOPE PUMPING STATION.

Engineers	$533 34	
Firemen	240 00	
Care of grounds	162 03	
Oil, waste and packing	61 14	
Sundries	28 29	
Pumping engine, No. 2, (Nagle)	68	
		1,025 48

HOPE RESERVOIR.

Watchman	$137 25	
Care of reservoir, gate house, etc	3 25	
		140 50

PIPE LINE AND SERVICE STOPS.

Repairs	$1,032 57	
Superintendence—salaries	416 66	
		1,449 23

METER DEPARTMENT.

Water meters	$1,855 43	
Setting and repairing meters	580 97	
		2,436 40

MISCELLANEOUS.

Town of Cranston, tax	$5,160 00	
Clerks' and inspectors' salaries	1,626 94	
Barn expenses	277 31	
Telephone lines	178 23	
Horse and wagon account	67 40	
Horse hire	62 50	
Public drinking fountains and troughs	51 50	
Sundries	46 85	
Real estate at Pawtuxet	35 00	
Real estate at Lincoln	14 81	
Analyses of water	3 00	
		7,523 54
		$15,929 00

The amount of expenditures from October 1, to December 31, 1886, inclusive, was . $20,876 28

The total expenditure to December 31, 1886, inclusive, was $6,358,479 97

The *net* expenditure for construction and extension from October 1 to December 31, 1886, inclusive, was	$4,483 46
The *net* expenditure for construction and extension to December 31, 1886, inclusive, was	5,094,257 45
The *net* expenditure for maintenance from October 1 to December 31, 1886, inclusive, was	11,487 18
The *net* expenditure for maintenance to December 31, 1886, inclusive, was	745,122 61

Bills deposited with the city treasurer for collection from October 1 to December 31, 1886, inclusive, amounted to . . . $29,191 89

As follows:

Water	$24,455 04
Water meters	2,977 00
Setting and repairing meters	984 21
Rent of real estate	265 52
Permanently closing service stops	15 00
Repairing services, etc	14 30
Penalties	8 00
Cast iron water pipe	345 58
Labor and materials, laying service pipes	127 24
	$29,191 89

During the quarter coupons from bills collected have been returned by the city treasurer, and receipted for, amounting to $45,373 93

As follows:

Water	$40,460 29
Water meters	2,941 80
Amount carried forward	$43,402 09

Amount brought forward	$43,402 09
Setting and repairing meters	1,247 50
Rent of real estate	215 52
Permanently closing service stops	20 00
Repairing services, etc	17 00
Penalties	8 00
Cast iron water pipes	345 58
Labor and materials, laying service pipes	118 24
	$45,373 93

SEWERS.

Assessments for the cost of constructing sewers in the following streets have been completed and certified to the city treasurer, viz.:

Webster and Ashburton streets, from Delhi to Martin.....	$3,606 77
Clinton street, from Prairie avenue to Plain street.....	4,177 74
Lockwood and Plain streets, from Broad to Dudley.....	7,509 33
East Beacon and Marlborough streets.....	1,013 48
Total.....	$16,307 32

During the quarter ending December 31, 1886, one hundred and sixty-four permits were issued drain-layers; eighty-five for new work, and seventy-nine for extension and repair of drains.

During the last quarter the work of constructing sewers has been completed in the following streets:

No. of resolution.	Date of approval.	
601.	July 2, 1885,	*Oriental, Oregon and Ashburton streets, from Admiral to Webster.*
256.	June 16, 1886,	*Brook street, from Bowen to Meeting.*
333.	" 17, "	*Benefit street, from summit near Church to Star street.*
335.	" " "	*Benefit street, from summit near Church to Meeting street.*
337.	" " "	*John street, from East to Brook.*
376.	Sept. 8, "	*Hay street, from Pine to Dyer.*
396.	" 17, "	*Lippitt street, from 40 feet west of Dwight to Camp.*

Catch-basins and extra inlets have been constructed as follows:

1 catch basin and two extra inlets, corner Whelden and Nichols streets.
1 catch basin and one extra inlet, corner Woodland and Holden streets.
1 catch basin, corner Beacon and Pearl streets.

Work upon the following sewers, completing the list ordered by the city council, had not commenced December, 31, 1886, viz.:

No. of resolution.	Date of approval.	
397.	Oct. 7, 1882,	*Orms street, from Carroll to present end of sewer in Orms.*
373.	Sept. 8, 1886,	*Broad street, from Somerset to Pearl.*
374.	" " "	*Charles and Ashburton streets, from West River bridge to present sewer in Ashburton street.*
375.	" " "	*Friendship street, from Somerset to Pearl.*
432.	Oct. 2, "	*Comstock avenue, from Broad street to Prairie avenue.*
443.	" " "	*North Davis street and Chalkstone avenue, from a point 340 feet southerly from Chalkstone avenue to present sewer.*
493.	Nov. 12, "	*Governor street, from Angell to Manning.*
494.	" " "	*Jewett street, from Holden street 220 feet westerly.*
515.	" 26, "	*Taber avenue, from Irving to Humboldt.*
542.	Dec. 7, "	*Benevolent street, from Thayer to Brook.*

Bills approved on account of sewers from October 1 to December 31, 1886, inclusive, amounted to

For construction, ... $20,655 01

Charged as follows:

Materials	$5,555	69
Clerk's salary	75	00
Tools	17	40
Testing cement	3	95
Sewer in Benefit street, from Williams to Power		63
" Benefit and Thomas streets	9	60
" Benefit street, from Church to Meeting	1,643	31
" Benefit street, from Church to Star	1,260	04
" Brook street, from Bowen to Meeting	1,770	61
" East Beacon and Marlborough streets	4	50
" Elbow street, from Tippecanoe to Ship	2	70
" Friendship street, from opposite No. 277 to Prince	2	70
" Hay street, from Dyer to Pine	269	30
" John street, from East to Brook	1,407	88
" Lippitt street, from Dwight to Camp	2,056	35
" Oriental and Oregon streets	5,774	43
" Pine street, from Broad to Linden	3	50
" Pleasant and Camp streets	10	50
Additional catch-basins	476	42
Outlet at Whelden street bridge	11	50
Contract reservations on completed sewers	299	00
	$20,655	01

For maintenance, ... $3,880 23

Charged as follows:

Cleaning basins and sewers	$2,687	80
Repairing basins and sewers	130	71
Cleaning and repairing old drains	165	09
Barn expenses	249	99
Salaries—superintendent and inspector	233	34
Inspection of connections	166	66
Tools	88	97
Telephone lines	67	65
Horses, wagons, carts, harnesses, etc	57	40
Sundries	32	62
	$3,880	23

The *net* expenditure for construction of sewers to December 31, 1886, inclusive, was $1,809,713 34

The *net* expenditure for maintenance of sewers to December 31, 1886, inclusive, was 224,346 87

Bills deposited with the city treasurer for collection from October 1 to December 31, 1886, inclusive, amounted to . . . $547 01

As follows:

Cleaning private drains, etc	$122 25
Filling cisterns	14 00
Pumping out cellars	14 00
Private drains laid in streets	371 67
Use of pump	15 00
Materials	9 09
Testing cement	1 00
	$547 01

During the quarter coupons from bills collected have been returned by the city treasurer, and receipted for, amounting to $549 07

As follows:

Cleaning private drains, etc	$113 75
Filling cisterns	14 00
Pumping out cellars	14 00
Private drains laid in streets	355 23
Use of pump	42 00
Materials	9 09
Testing cement	1 00
	$549 07

HIGHWAYS.

General Nelson Viall, for several months superintendent of highways, felt himself called to take again the position of warden of the Rhode Island State Prison, and tendered his resignation October 16. The Board, in a letter of same date accepting his resignation, expressed to him its sense of his faithfulness.

October 5th, the offer of E. D. Smith & Sons to repair the asphalt pavement around the city hall for the sum of seventy-five cents per square yard was accepted.

October 19th, the offer of the Rhode Island Granite Works to furnish five hundred feet of fourteen-inch cross-walk stone, delivered on cars at the city yard, was accepted. Amount, $140.00.

October 21st, proposals for paving Dorrance street, from Westminster to Exchange place, were opened and the contract awarded to C. W. Blakeslee & Sons, of New Haven, Conn. A contract was subsequently executed, which amounted to $3,791.30.

November 8th, the offer of Garvey Brothers to furnish twenty-five three-foot curb-corners, delivered on cars in city yard, was accepted. Amount, $125.00.

November 12th, the proposal of Dennis Lyons to grade a portion of Bellevue avenue for the sum of thirteen cents per cubic yard for the sand and gravel, and twenty cents for loam and subsoil to be moved to Brattle, Dahlia, Jessamine and Lilac streets, was accepted, and a contract was subsequently executed with him for the work.

December 24th, a statement of the cost of concreting sidewalks under resolutions of the city council with ten per cent. added, and amounting to $478.18, was certified to the assessors of taxes.

Seven permits to open streets were issued during the quarter.

During the last quarter, portions of the following streets have been repaired:

Chestnut street, from Bassett to Clifford, repaved,	Pawtucket avenue,
North street,	Lockwood street.

During the quarter ending December 31, 1886, the following work was completed, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of order.	
May 7, 1883,	*Reservoir avenue, east side, from Greenwich street to the railroad bridge.*
June 19, 1884,	*Carter street, from Greenwich to the railroad.*
" 26, "	*Stimson avenue, from Hope street to Angell.*
Oct. 16, "	*Burnett street, from Greenwich to Public.*
" 16, "	*Webster street, from Delhi to Ambrose.*
April 16, 1885,	*Woodland street, from Park to Holden.*
June 18, "	*George street, from Governor to Ives.*
Sept. 2, 1886,	*Benefit street, opposite sundry estates.*
" 27, "	*Wickenden street, south side, from Benefit to Bridge.*
Nov. 18, "	*Ashburton street, southwesterly side, from Chalkstone avenue to the line of the Second Police station estate.*
" " "	*Benefit street, in front of several estates.*

Abate Nuisance on.

No. of resolution. Date of approval.

218. May 20, 1882, *Mitchell street, caused by overflow of surface water:*—probably remedied by the grading of Hamilton street.

Sidewalks to be Concreted.

No. of resolution. Date of approval.

255. June 16, 1886, *Harrison street, in front of engine house.*

To be Brought to Grade.

Date of order.

Dec. 1, 1885, *Jackson avenue, adjacent to the estates of Eugene Dailey and wife, and Sarah Cusick, and fill in around the houses when they shall have been raised.*

No. of resolution. Became a law.

348. July 22, 1886, *Veazie street, at the bridge.*

Date of order.

Sept. 27, 1886, *Whelden street, from Printery to Nichols.*
Nov. 18, " *Somerset street, from Providence to Prairie avenue.*

To be Repaired.

No. of resolution. Date of approval.

125. March 30, 1886, *West Friendship street, cobble pavement to be removed and roadway macadamized.*

425. Sept. 30, 1886, *The pavement around the City Hall.*

Date of order.

Dec. 2, 1886, *Pine and Hay streets in the immediate vicinity of the estate of Alexander Duncan, wife and children.*

To take Possession of.

Date of order.	
May 6, 1886,	*Brown street, from Olive to Barnes.*
" " "	*Wickenden street, from Benefit to a point near junction of Bridge and Farthing streets.*

Paved with Granite Blocks.

No. of resolution.	Date of approval.	
85.	March 6, 1885,	*Market square and College street, portions of.*
502.	Nov. 7, "	*Dorrance street, from Westminster to Exchange place.*

The following work was, December 31, 1886, in progress, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of order.	
July 19, 1883,	*Chalkstone avenue, from Charles street to Black:*—curbing set and gutters paved, but roadway not built.
Dec. 31, "	*Dexter street, from Cranston to Cromwell.*
June 26, 1884,	*Diman place, from Angell street to Asylum wall.*
Oct. 16 "	*Daboll street, from Greenwich to Updike:*—finished except concreting gutters.
" " "	*Grove street, from Almy to Tobey:*—finished except concreting gutters.
March 19, 1885,	*Blackstone street, south side, from Plain to Eddy:*—curbing is set and gutters paved except the backing.

April 16, 1885, *Burnside street, from Public to Potter's avenue*—finished except building portion of roadway.

" " " *Peace street, from Broad to Prairie avenue:*—portion of the curbing set.

May 21, " *Chalkstone avenue, from Douglas to Smith street:*—finished except building roadway.

June 4, " *Beacon street, from Lockwood to Pearl:*—finished except roadway.

June 18, " *Blackstone street, north side, from Eddy to Culver:*—finished except building roadway.

July 16, " *Grant street, from Knight to Carpenter.*

Sept. 17, " *Pleasant street, from North Main to Camp:*—portion about 400 feet east of North Main street completed.

TO BE BROUGHT TO GRADE.

Date of order.

June 18, 1885, *Austin street, from Potter's avenue to Public street:*—the greater portion of this street has been worked to grade.

June 18, " *Hamilton street, from Potter's to Adelaide avenue:*—the greater portion of this street has been brought to grade.

No. of resolution. Date of approval.

441. Oct. 2, 1886, *Bellevue avenue, from a point 950 feet easterly of Cranston street to Long Pond:*—the grading is nearly completed.

Date of order.

Nov. 18, 1886, *Printery street, near Whelden street:*—a portion of this street has been brought to grade.

To be Brought to Grade and Provision Made for Surface Water.

Date of order.

July 1, 1886, *Ridge street, from west line of Tobey street to Atwell's avenue, and Atwell's avenue near railroad bridge:*—the grading of Ridge street is nearly completed.

Gutters to be Concreted.

Date of order.

Oct. 14, 1886, *Benefit street, between Transit and North Main:*—about one-half of this work is completed.

To be Repaired.

No. of resolution. Date of approval.

297. July 1, 1886, *Benefit street, from Halsey to Transit:*—finished except cross-walks near North Main street.

To take Possession of.

Date of order.

April 16, 1885, *Earle's lane, now Pleasant street, from North Main street to Camp:*—a portion near North Main street has been brought to grade.

April 16, " *Gordon avenue, from Public to Colfax street:*—finished except removal of fence at Gallup street.

To be put in Condition Safe and Convenient for Public Travel.

Date of order.

Oct. 14, 1886, *Transit street, from Ives to Gano:*— some work has been done under this order.

To be Filled.

July 17, 1884, *Pond opposite works of the Nicholson File Company:*— a small portion of the pond has been filled.

The following work ordered by the board of aldermen and city council had not commenced December 31, 1886, viz.:

Sidewalks to be Curbed and Gutters Paved.

Date of order.

Aug. 3, 1882, *Capron street, in front of Julian street school-house estate.*

Oct. 19, " *Potter's avenue, from Broad street to Greenwich.*

Nov. 16, " *Eddy street, from Thurber's avenue to Pavilion avenue.*

June 26, 1884, *Richmond street, from Ship to Point.*

May 21, 1885, *Adelaide avenue, north side, from Elmwood avenue to Melrose street.*

" " " *Cushing street, from Prospect to Brook.*

June 4, " *Creighton street, from Prospect to Brown.*

" 18, " *Pekin street, from Chalkstone avenue to Bailey street.*

" " " *Public street, from Broad to Greenwich.*

July 16, " *Brighton street, from Knight to Vinton.*

Sept. 17, " *Vineyard street, from Hawthorne to Carter.*

Oct. 15,	1885,	*Smith street, from Ruggles to Oakland avenue.*
Nov. 19,	"	*Briggs street, from Ocean to Plain.*
" "	"	*Linden street, from West Clifford to Providence.*
" "	"	*Whitmarsh street, from Broad to Updike.*
Dec. 17,	"	*Hedley street, from Palmer to Shove.*
" "	"	*Ives street, from Pitman to Waterman.*
" "	"	*Laura street, from Melrose to Hamilton.*
" "	"	*Tockwotton street, from Benefit to South Main.*
Jan. 27,	1886,	*Governor street, from Wickenden to Tockwotton.*
Feb. 18,	"	*Public street, from Broad to Prairie avenue.*
April 15,	"	*Wilson street, from Harrison to Dexter.*
May 20,	"	*Adelaide avenue, adjoining estate of William Whitehead.*
June 17,	"	*Austin street, from Public to Potter's avenue.*
" "	"	*Chalkstone avenue, from Academy to River avenue.*
" "	"	*Cypress street, from Camp to East avenue.*
" "	"	*Hamilton street, from Potter's to Adelaide avenue.*
" "	"	*Sayles street, from Eddy to Plain.*
" "	"	*Violet street, from Orms to Chalkstone avenue.*
Aug. 5,	"	*Princeton avenue, from Broad to Greenwich.*
Sept. 16,	"	*Cabot street, from Angell to Meeting.*
" "	"	*Linden street, from Pine to Friendship.*
Oct. 21,	"	*Sayles street, from Ocean to Miller.*
Nov. 18,	"	*Ridge street, from west line of Tobey to Atwell's avenue.*

Obstructions to be Removed.

Date of order.

Sept. 10, 1885, *Governor street, between Wickenden and Tockwotton.*

Sidewalks to be Concreted.

No. of resolution. Date of approval.

525. Dec. 1, 1886, *Harrison street, from Cranston to Sprague.*

541. Dec. 7, " *Kenyon street, northerly side, from America to Dean.*

To be Brought to Grade.

No. of resolution. Date of approval.

517. Oct. 28, 1884, *Bucklin street, from Carter to Earl.*

To Take Possession of.

Date of order.

Sept. 16, 1886, *West Exchange street, from Cove to Atwell's avenue.*

Bills approved on account of highways from October 1 to December 31, 1886, inclusive, amounted to $70,951 48

Classified as follows:

Repairs on unpaved streets	$3,249 96
Repairs on paved streets	419 82
Cleaning streets	4,743 49
Removing ice and snow	2,831 33
Crushed stone, material and labor	4,355 67
Barn expenses	1,697 47
Amount carried forward	$17,297 74

Amount brought forward	$17,297 74	
Stone—paving and crosswalk	1,657 17	
Tools, implements, etc	989 08	
Blacksmith and wheelwright shop	915 54	
Salaries—superintendent and clerks	911 82	
Screening gravel	726 13	
Labor on materials	683 32	
Horses, wagons, carts, harnesses, etc	460 50	
Repairs on stone crushers	371 04	
Trimming trees	217 05	
Watchman at city yard	195 60	
Harness shop, materials and labor	183 95	
Steam rollers—repairs and supplies	141 27	
Fencing streets, material and labor	89 66	
Horse car tickets	25 00	
Sundries	15 44	
Office expenses, city yard	9 98	
Telephone lines	2 89	
		$24,893 18

NEW WORK, BUILDING AND RE-BUILDING STREETS, ETC.

SIDEWALKS CURBED AND GUTTERS PAVED.

Adelaide avenue, adjoining estate of William Whitehead	$2 00	
Adelaide avenue, north side, from Elmwood avenue to Melrose street	9 33	
Ashburton street, southwesterly side, from Chalkstone avenue to Second Police Station	68 02	
Beacon street, from Lockwood to Pearl	275 78	
Benefit street, in front of certain estates	237 50	
Benefit street, in front of estate of O. A. Washburn, jr.	9 99	
Benefit street, in front of estates of Josiah W. Crooker and Allen Greene	32 20	
Blackstone street, south side, from Plain to Eddy	891 48	
Blackstone street, north side, from Eddy to Culver	105 55	
Burnett street, from Greenwich to Public	62 89	
Burnside street, from Public to Potter's avenue	789 13	
Carter street, from Greenwich to the railroad	116 65	
Chalkstone avenue, from Charles to Black	280 62	
Chalkstone avenue, from Douglas avenue to Smith	1,095 35	
Dexter street, from Cranston to Cromwell	236 83	
Diman place, from Angell street to Asylum wall	10 10	
Amounts carried forward	$4,223 42	$24,893 18

Amounts brought forward.....	$4,223 42	$24,893 18
Doyle avenue, from East avenue to Olney.....	33 21	
George street, from Governor to Ives.....	721 14	
George street, from Ives to Gano.....	201 80	
Grove street, from Tobey to Almy.....	1,005 68	
Peace street, from Broad to Prairie avenue.....	646 15	
Pleasant street, from North Main to Camp.....	1,258 23	
Reservoir avenue, east side, from Greenwich street to the railroad bridge.....	63 00	
Sheldon street, from Hope to Brook.....	40 50	
Stimson avenue, from Hope to Angell.....	227 47	
Webster street, from Delhi to Ambrose.....	1,349 98	
Wickenden street, south side, from Benefit to Bridge.....	549 23	
Woodland street, from Park to Holden.....	536 96	
Brought to Grade.		
Austin and Hamilton streets, from Public street to Adelaide avenue.....	756 00	
Bellevue avenue, to Long pond.....	112 00	
Jackson avenue, adjacent to estates of Eugene Dailey and wife and Sarah Cusick..	91 11	
Printery street.....	300 82	
Ridge street, from Tobey to Atwell's avenue....	10,479 14	
Somerset street, from Providence to Prairie avenue.....	675 54	
Veazie street, at the bridge.....	1,176 01	
Whelden street, from Printery to Nichols.....	279 19	
Repaired.		
Pavement around the City Hall.....	1,501 82	
Pine and Hay streets, corner of.....	349 72	
West Friendship street, cobble pavement removed, etc.....	131 44	
Take Possession of.		
Brown street, from Olive to Barnes.....	354 00	
Gordon avenue, from Public to Colfax.....	508 99	
West Exchange street, from Cove to Atwell's avenue.....	63 88	
Amounts carried forward.....	$27,636 43	$24,893 18

Amounts brought forward.....	$27,636 43	$24,893 18
Paved with Granite Blocks.		
Dorrance street, from Westminster to Exchange place.....	3,966 21	
Market square and College streets, portions of...	8,754 74	
Concrete Sidewalks.		
Borden and Plain streets, front of 5th Police Station.....	53 50	
Harrison street, front of engine station.....	240 48	
Rebuild.		
Benefit street, from Short alley to Transit.....	5,260 53	
Concrete Gutters.		
Benefit street, from Transit to North Main.....	146 41	
		46,058 30
		$70,951 48

Bills deposited with the city treasurer for collection, from October 1 to December 31, 1886, inclusive, amounted to . . . $3,085 41

As follows:

Labor and materials.....	$2,964 31
Manure from barn.....	72 00
Street sweepings.....	42 60
Plow points.....	5 50
Blocks.....	1 00
	$3,085 41

During the quarter coupons from bills collected have been returned by the city treasurer, and receipted for, amounting to . . . $586 10

As follows:

Labor and materials	$467 00
Manure from barn	72 00
Street sweepings	42 60
Blocks	4 50
	$586 10

The amount of expenditures on account of sidewalks and curbing, from October 1 to December 31, 1886, inclusive, was . . $8,960 66

Sidewalks and curbing bills deposited with the city treasurer for collection, from October 1 to December 31, 1886, inclusive, amounted to $257 38

During the quarter coupons from sidewalks and curbing bills collected have been returned by the city treasurer, and receipted for, amounting to $267 13

CHAS. E. CARPENTER,
CLINTON D. SELLEW,
CHAS. H. HUNT,
Board of Public Works.

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